Grand Prix

FAREWELL GILLES

CASABLANCA "IT'S BETTER ON A CAMEL"

WATSON WINS TRAGIC RACE

BELGIUM

N° 47 - MAY 13th 1982 - GREAT BRITAIN £ 1 - CANADA 3$50 - IRL £ 1,40

GILLES

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VILLENEUVE

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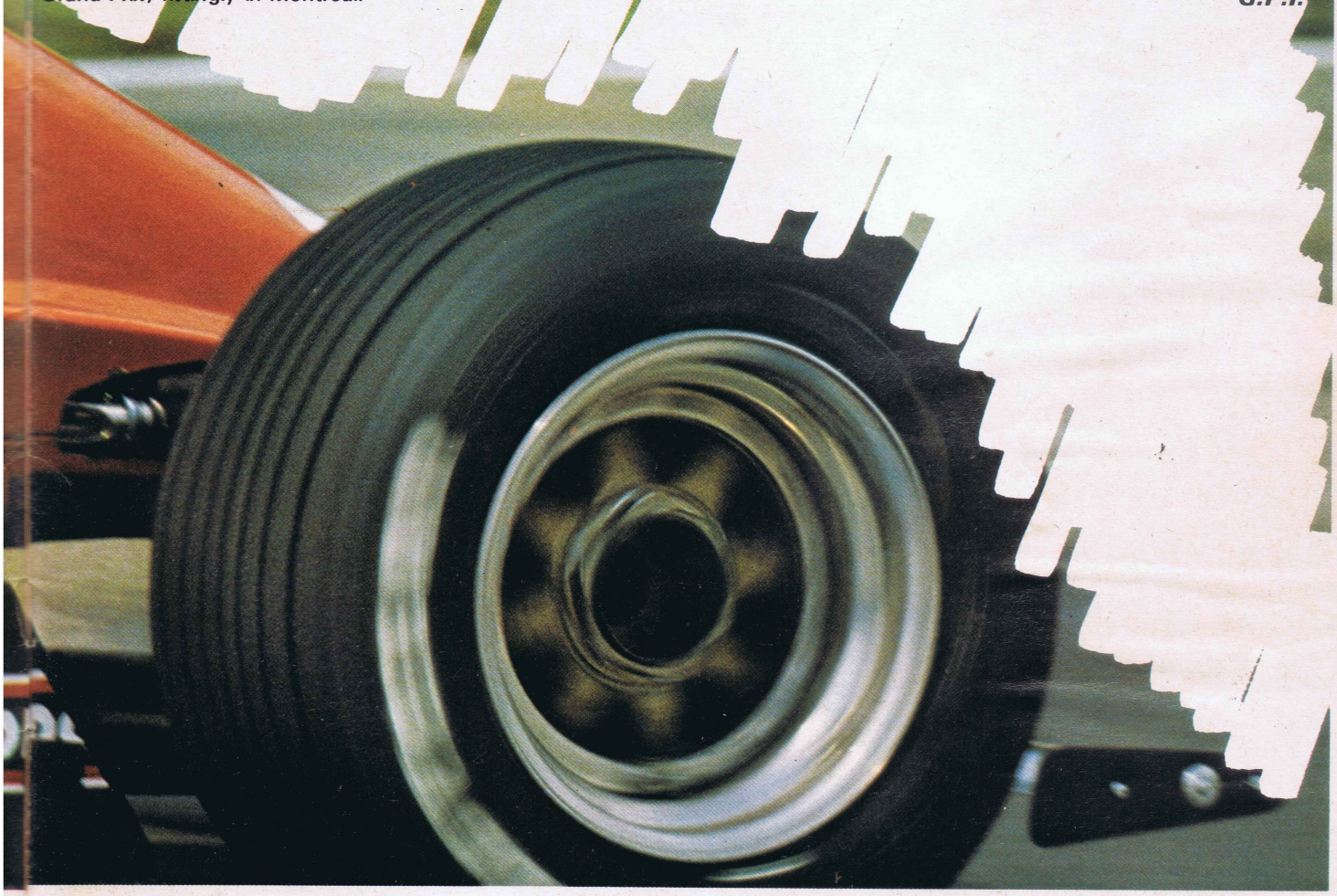
Villeneuve went to work for the Commendatore at the end of 1977, and the relationship began shakily. The cars were uncompetitive, and Gilles was too anxious to please. In Japan he stepped unhurt from his car after an enormous accident. But Ferrari kept the faith, and through 1978 his young driver's true worth began to emerge. At the end of the year he won his first Grand Prix, fittingly in Montreal.

In 1979 Gilles took three races, and led many more. Teammate Jody Scheckter won the World Championship on consistency, but it was Gilles who led the Ferrari attack. The 1980 season was a desolate one for the Italian team, but in 1981 Villeneuve was once more in the news with a couple of brilliant victories, at Monaco and Jarama, in the difficult 126C turbocharged car.

What was truly different about Villeneuve, what made him stand proud of his generation, was that he never coasted. Mauro Forghieri called it ''a rage to win'', and added that it was beyond his experience of other drivers. Allied to a natural talent which was in the class of Clark or Stewart, this flair and courage gave him a special place in the hearts of racing fans across the world. Simply put, he was worshipped.

Gilles Villeneuve was a man who saved his passion for the track. There were never any excuses from him, never any attempt to labour the shortcomings of his car. Indeed, they were never necessary, for there was never the slightest doubt that he, at any rate, had done all he could. Honourable, straightforward and full of humour, he was a consummate racing driver, and his death leaves a dreadful sadness over our sport. All our sympathies go to Joanne, Melanie and Jacques.

G.P.I.



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THE LONGINES STYLE

Longines named sole Grand Prix timekeeper. To time events to 1/1000th sec.

For the next three years, Longines will be sole official timekeeper of Formula One world championships – from Kyalami in 1982 to Las Vegas in 1984. The appointment was made by FISA and FOCA. Longines is also the choice of the Ferrari and Renault racing stables. On the track, on your wrist, look to Longines for the last word in time.

The Longines-Ferrari Collection. Ultra-slim quartz movement, centre second, calendar. Sapphire glass. Water-resistant. 2-toned model with white, gilt or black dial. Hers: Ref. 4888. His: Ref. 4870.

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Ferrari

LONGINES
OFFICIAL TIMEKEEPER OF
THE FERRARI RACING TEAM

LONGINES

A Matter of Style

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Grand Prix international

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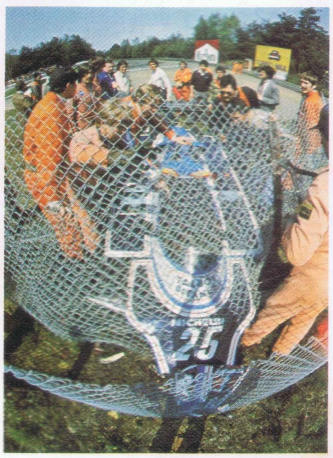

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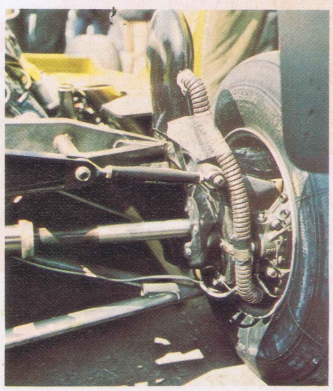

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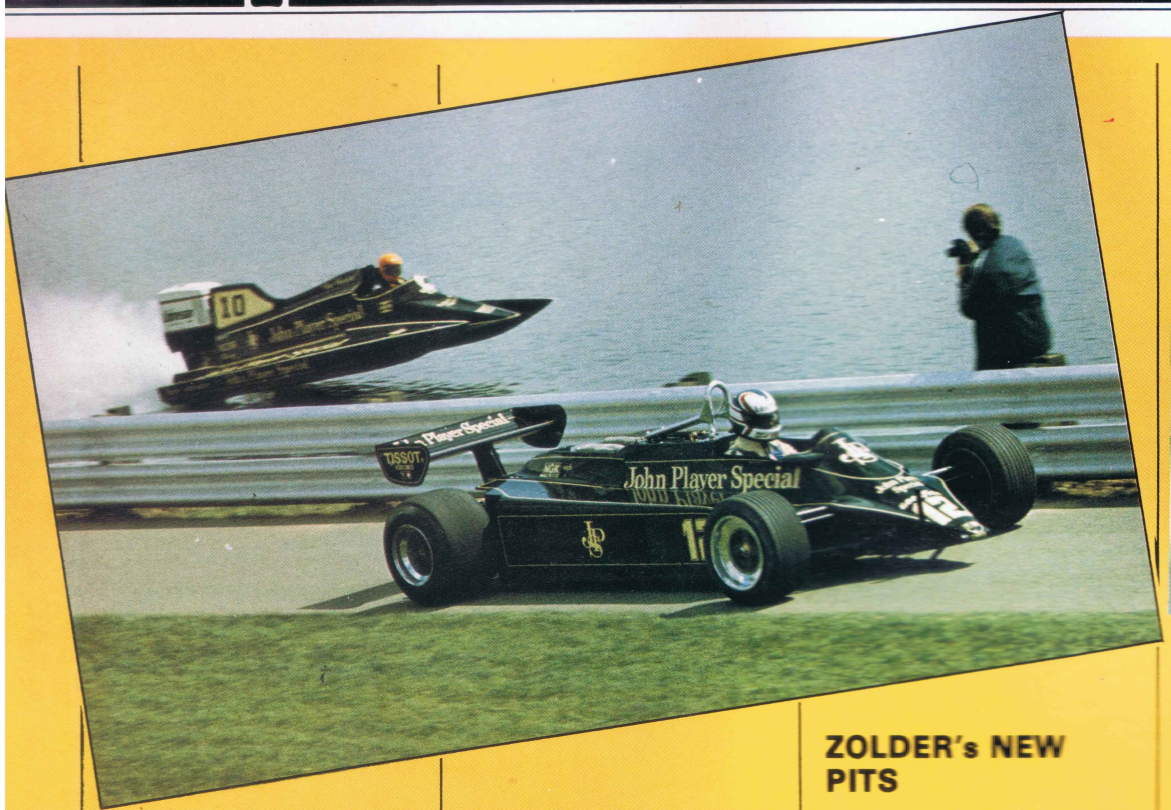
The paddock in Zolder



JPS F1 v JPS BOAT

On the day before he left England for Belgium, Lotus driver Nigel Mansell was taking part in an unusual challenge race. John Player Special, the cigarette brand which sponsors both the Lotus F1 team and the Formula 1 powerboat world championship, had organised a "Powersport Challenge" between one of last year's JPS Lotus 87s and one of the very light JPS Velden powerboats which compete in the F1 boat championship.

The challenge took place at the splendid watersport facility in Nottingham, close to the John Player factory. Protected by a quarter-mile length of guardrail, Mansell did a series of standing-start runs down a bumpy stretch of road alongside the boating lake, slowing down on a piece of lawn (on slicks!) from his terminal speed of about 115 miles per hour.

"It wasn't really a fair match", said Nigel, *"because we had to give the boat a running start. In the end we came out even, because although the boat was quicker on initial acceleration, our JPS car was definitely faster at higher speed."*

The 140 mph JPS powerboats are powered by special Johnson 3.5-litre two-stroke V8 racing engines, made in the USA. No power figures are available, but it is believed that they produce perhaps as much as 100 bhp more than the 495 horsepower of the Cosworth-Ford V8 used by Lotus.

IT'S THE DETAIL THAT COUNTS

With the present generation of Grand Prix cars so sensitive to the slightest change, they must be 'set-up' on an ultra-flat surface for the best results. That can often be hard to find at a race track, so the Williams team brought their own. Parked next to their pit in the pit lane was a huge metal plate so that the cars' ground clearance could be checked quickly and accurately at any time.

BOERI VS BALESTRE?

It seems that M. Balestre was not very happy over Monaco organiser Michel Boeri's opposition at the recent Casablanca meeting. During the *Tour de Corse* rally he held a meeting of the FFSA commitee members discussing amongst other things, "sporting relations between the FFSA and Monaco", the Monaco organisers relying heavily upon the FFSA's help during the Monte Carlo rally.

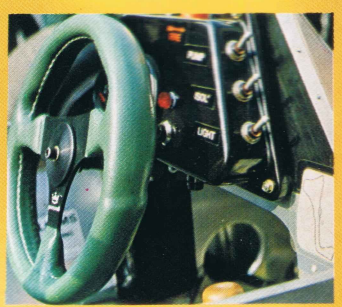
ZOLDER's NEW PITS

Completed at a cost of 1.2 million US dollars, the new pit complex at Zolder was ready in good time for the Belgian Grand Prix. "Home" to the country's GP since 1973, the Zolder circuit was frequently criticised in the past for the dangerous working conditions imposed on all those who had to use its narrow pit lane.

This year, however, there were no fewer than 32 covered garages awaiting the F1 teams. Each was fitted with lockable front and rear doors, with a wide pit lane in front and parking space for the transporters behind each pit.

In spite of the substantial investment, local sources suggest that next year's Belgian GP may be held at the rebuilt Spa-Francorchamps circuit, provided that circuit manager Jacky Ickx is able to get FISA approval. Belgian government policy is to ensure that important national sporting events, such as the Grand Prix, are allowed to alternate between venues in the French- and Flemish-speaking parts of the country.

If we do go to Spa next year, the international Press would be delighted if Monsieur Ickx is as accomodating as Zolders's Monsieur Belien. On top of the new pit complex at Zolder was a splendid new Press room with closed-circuit TV and an excellent restaurant right next door...



THIS WAY, DEREK

The Williams mechanics had a little surprise waiting for their new Irish driver Derek Daly when he stepped into his car for the first practice session at Zolder. Stuck to the instrument panel was a map of the circuit, "so he would be able to find his way around", and the gear lever was marked 1-2-3-4-5. *"I kept following the road and I ended up back at the pits, so it must have been a waste of time anyway"*, joked Derek.

KEKE'S LATEST TOY

Keke Rosberg has never been the kind of racing driver to let his money sit around in a bank. He arrived at Zolder with his latest acquisition, a beautiful Mercedes 500 coupé loaded with all the latest AMG tuning equipment and a special all-silver paint job with tinted smoked windows. *"It's fabulous to drive and looks great"*, said Keke who already has a Ferrari and an AC Cobra replica filling his garage in his new house in England. *"I think I might even sell the Ferrari it's so beautiful - but the plane stays"*, he said with a big smile.

JARAMA 'OFF' - DEFINITE

Continuing difficulties between two of Spain's race organising bodies have resulted in the cancellation of the Spanish GP. The failure of the organisers to settle their obligations after last year's race led to the 1982 GP being dropped from the calendar, but the cancellation of the Argentine GP gave the organisers in Madrid some hope of getting their event reinstated at the end of June.
The dispute, which involves the financing of safety improvements to the Jarama circuit, could not be resolved in time. It is now believed that Zandvoort — which has also lost its 1982 Grand Prix date — may apply for the Dutch GP to take place instead.

BACK TROUBLE FOR BRUNO

After Bruno Giacomelli's Friday practice had been spoiled by a misfiring engine, caused when an HT ignition lead chafed through but which remained hidden by a piece of covering, Bruno's bad luck did not improve any on Saturday. After a few laps he came into the pits white faced and hardly able to breathe having pulled a muscle in his back. *"I was cold when I went out in the car and was driving hard right away. Suddenly I felt this horrible crick in my back and I could hardly breathe. I took pills and also had a Novocaine injection before the second session but it didn't help much. I was a long way off my limit"*, said Bruno after practice. *"I don't know if I will be able to go the whole distance in the race, even with another injection"*, he added. *"When you are driving hard, you need to put a lot of force from your back muscles, and that's when it really hurts."*

BMW's ULTIMATUM TO ECCLESTONE

BMW was just one of many important Formula 1 sponsors who reconsidered their position after the FOCA boycott of the San Marino GP on April 25. We understand that a board meeting of the German car manufacturer, held in Munich a few days after the Imola race, was only persuaded by some strong arguments not to vote for an immediate halt to the company's racing activities.
The two-year association between BMW and Brabham has yet to bear any fruits in Formula 1. BMW's production-based 1.5-litre turbo engine, already under development for more than three years, had been raced in a Brabham only once before Zolder. It proved extremely powerful at Kyalami, but deficiencies in the handling and braking of the two Brabham-BMWs persuaded the team to revert to Cosworth power for the GPs of Brazil and Long Beach.
The BMW directors will have been aware of the difficult choice facing Bernie Ecclestone over their engine. While it is in the interests of his team to have turbo-power, Ecclestone in his capacity as president of the Formula One Constructors' Association is committed to protecting the interests of the smaller teams which rely on less expensive non-turbo engines.
Asked to comment on reports that the BMW turbo engine would be supplied to other F1 teams in the near future, the company's racing manager, *Rennleiter* Dieter Stappert, said that such an arrangement was "not possible in the immediate future". Nevertheless, we hear a strong rumour that BMW has already opened negotiations with Frank Williams about the possibility of a turbo Williams-BMW for 1983.

NEW OSELLA FOR MONACO

The Ligier team were not the only ones in the pit lane who hoped to have a new car ready for this race. Osella have a new car on the way, but a delay in the rear suspension pieces saw the Italian team unable to bring it to Zolder. Jarier hopes to go testing shortly before the Monaco GP where it should make its début.

JONES GOES, COLLINS ARRIVES.

Alan Jones might have left the Williams team at the end of last season, but they have a new Australian in their ranks. Peter Collins, formerly of Lotus and, from the beginning of this season, ATS, takes over from Jeff Hazell as race team manager for Frank.
Jeff Hazell left the team shortly after Long Beach to take up a new post as race development manager with Lola cars.

THE VIEW FROM THE SUMMIT

No sooner had the news of Gilles Villeneuve's accident spread around the Zolder paddock than the political factions started to make capital of the tragedy. It was a distasteful method of advancing one's arguments, albeit not unexpected given the struggles which continue to rack the sport.
"See what dangerous cars the current regulations have produced," said certain drivers. "It wouldn't have happened if he hadn't been going 40 km/h quicker because of all that tubo power," insisted the representatives of several non-turbo teams.
Meanwhile, from the rally in Corsica, FISA chief Jean-Marie Balestre fired off the inevitable press release. He has convened a special meeting of the Executive Committee to push forward his safety proposals. No doubt, we'll be hearing more of those in the near future.
But Gilles Villeneuve did not die because any regulations were at fault. He died because he lived life on the limit, and because he stepped once too often beyond that limit. It was for just that quality that he was loved and revered by racing fans across the world. And in the end it was his downfall.
To Gilles Villeneuve, fear — the limiting factor in most human reactions — was something which he rarely considered. Had he done so, he would not have been the kind of racing driver who left us the memories we treasure now.
Perhaps the most suitable comment which I heard after the accident (and certainly one of which Gilles would have approved) came from Eddie Cheever. Shortly before he climbed into his Ligier to start the race, Eddie made a confession. "In a situation like that I know I would have been scared stiff," he said. "But I am sure that when Gilles felt his Ferrari take off, his last thought was anger, plain and simple, because he knew that he had spoiled that one quick lap."
Just as there are tragic accidents in any of the other sports which are spiced with danger, motor racing will continue to kill. Each year, literally hundreds of mountaineers die in falls. Yet their sport continues to gain in popularity.
Gilles Villeneuve had reached the top of his personal mountain. Perhaps he saw far more from there than the rest of us will ever see from the bottom.

Jeff Hutchinson

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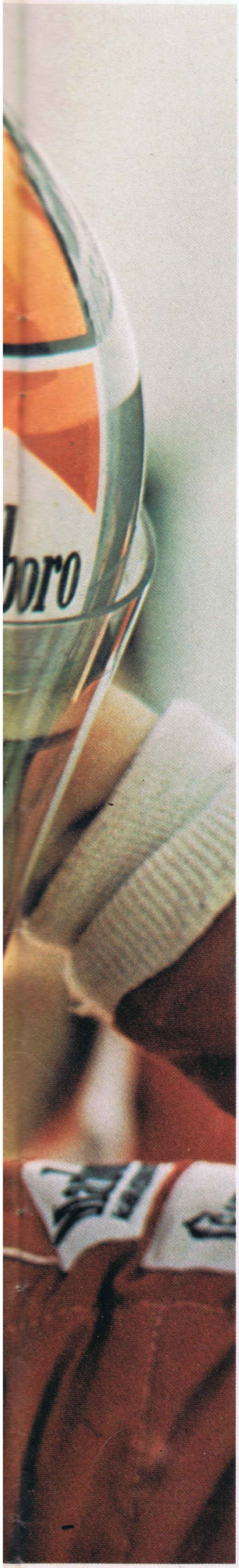
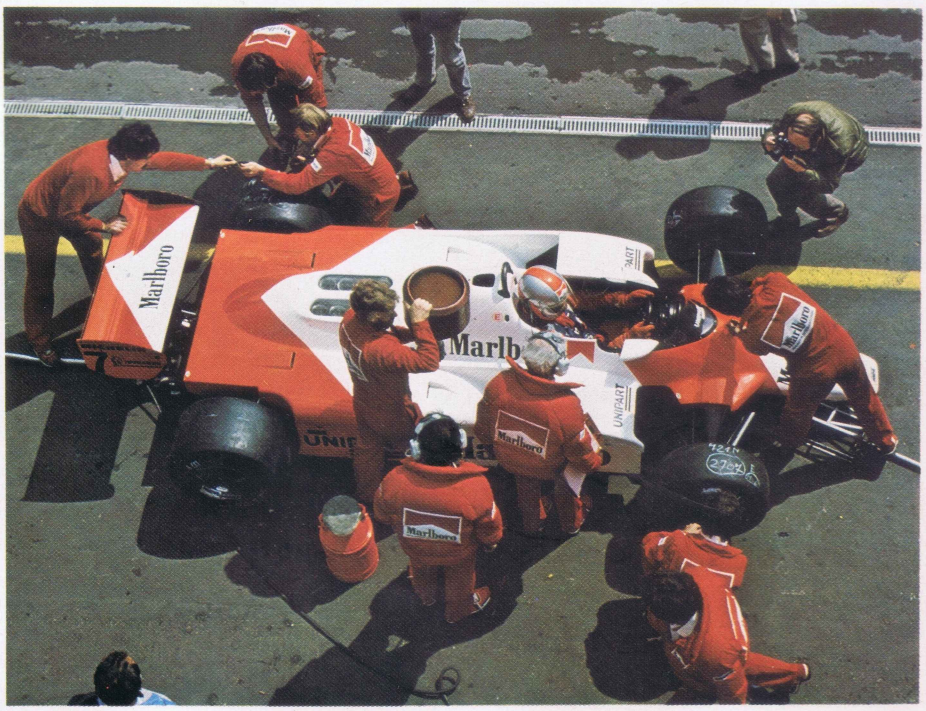
WIN SOME, LOSE SOME



John Watson might not consider himself a "Superstar" but his performance in Belgium was up in that class - undoubtedly the best of his three GP wins in 125 starts. "It was nice to have come from behind and win - without default," said John after the race.

Although John Watson's practice performance is rarely outstanding, the Irishman came from tenth place on the grid to victory after a faultless drive that saw him take the lead with two laps to go. A number two driver for the McLaren team, he now leads his own team-mate Niki Lauda in the World Championship points standings, in which he trails leader Alain Prost by just one point.



There was good news and bad news for the McLaren team in Belgium. The good news was nine points for John Watson and promotion to second place in the championship. The bad news came half an hour after the race when Niki Lauda's third-placed MP4 tipped the scales just 2-kilos underweight. The team forfeited 4 points which would have put Lauda third in the championship.

by Jeff Hutchinson

"I *think we can win this one",* Ron Dennis had said to McLaren designer John Barnard on Saturday night, the eve of the race. Both the McLarens had run well during Saturday's practice. Good on full tanks in the morning, Lauda had set an impressive fourth fastest time in the final session, happy enough with his car to sit out the last half an hour knowing that the could go no quicker.

John Watson, his car throwing out a little too much oil for comfort, needed an engine change before the race to be on the safe side, but otherwise had no problems. He was tenth, but then "Wattie" has always had trouble qualifying well, and invariably goes better in the race.

The team must nave been thinking of Lauda, however, when they were looking for a win, but on the day it was Watson who came through to snatch a fine win from Rosberg in the final laps of the race. He topped an inspired charge through the field with fastest lap of the race and a new lap record on the lap he went through to take the lead.

"It was certainly the most satisfying win of my career to come from so far back to win... and not by any default", said John he reflected on his third GP victory in 125 starts.

"But it was a bad weekend for racing", he reflected; *"what happened yesterday gave the weekend a very unpleasant atmosphere which no win could*

ever wipe away.''

After the race, John was one of the few drivers who had good things to say about his car. *''It was faultless all through the race. The brakes were good and the Michelin tyres excellent, which allowed me to drive the race consistently from start to finish.''*

His superiority over the rest of his opposition came from his tyres which, in contrast, were the downfall of his team-mate Niki Lauda (not withstanding protests, that is).

''It was a team decision. I tried the harder compound lefts with the softer rights in the morning warm-up and the car felt good. Niki decided to use the softs all round. He didn't try the same combination during the warm-up and didn't want to gamble on them for the race.

''In the race I passed four or five people early on without much trouble, but then I got stuck behind Patrese. He wasn't quick in the corners but very fast down the straights. Every time I got alongside he could leave me under acceleration. I had to use the traffic to finally get by. I did it at the hairpin when we came up on two slower cars. We both got past the first one going into the corner, but then he got stuck behind the other car for a second. I moved down the inside and was through, then I overtook the other slower car as we came on to the straight.

''By the end of the race the track was breaking up badly on a several corners. I got by Keke when he oversteered on the marbles and slid off the edge of the track. It was easy for me.''

After the race the cars were wheeled straight to the weigh-in scales and there were anxious moments as Niki's car was pushed forward. It came out 2-kilos under, despite Niki's constant appeals to his team all weekend. *''Make sure that whatever happens my car is legal''*, he had insisted.

Watson's car came off the scales with just 1-kilo over the top to the disapointement of Rosberg, whose Williams weighed in 11 kilos over the 580 minimum.

It was a bitter blow for Lauda, but with the news that Ferrari have dropped their appeal over his Long Beach win, things could have been worse.

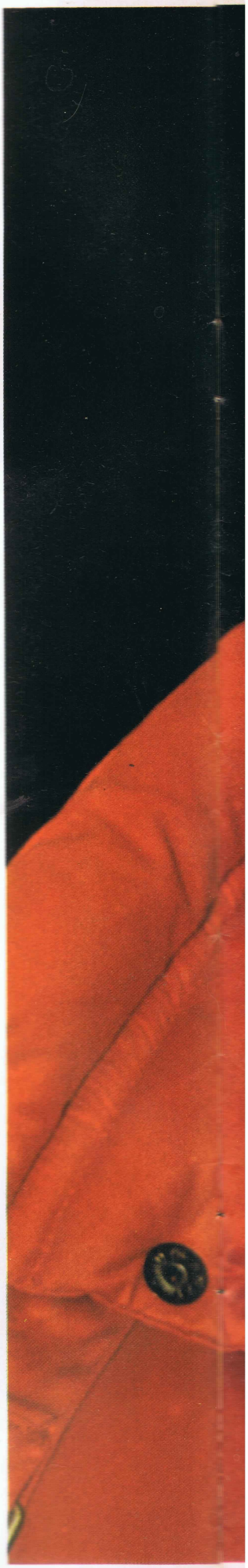
It had been a tough race for the Austrian, who, like Rosberg, lost his left rear tyre as the race went on: he was also suffering from poor brakes. His tyre problem was not helped either when a car spun in front of him and he had to lock his brakes to avoid missing it, flat spotting the tyres.

Who knows, perhaps Watson's slow start to the race and his laps behind Patrese even helped towards his win, for the punishing first third of the race on full tanks could not have helped Niki's Michelins any more than Keke's Goodyears.

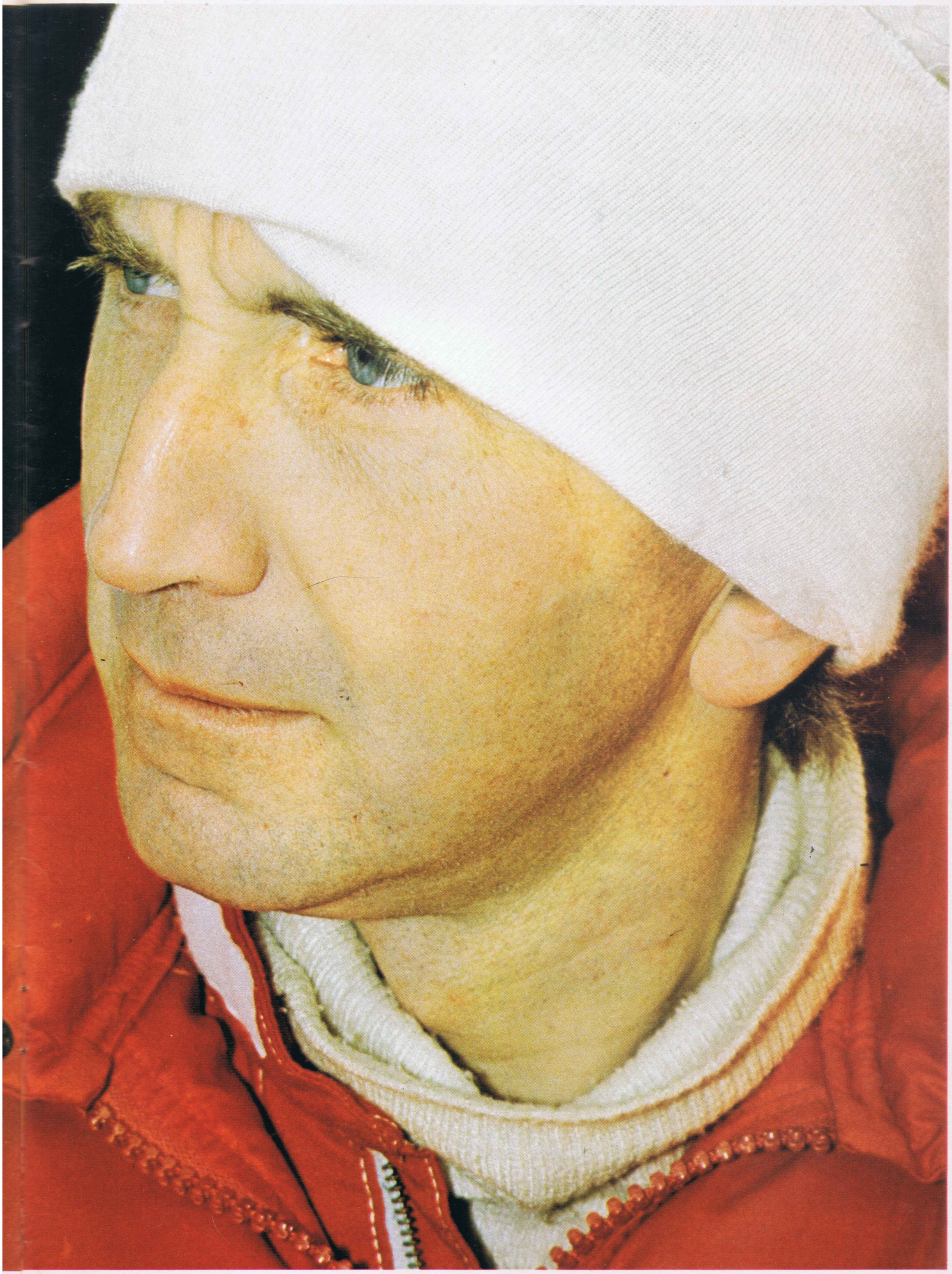
John's win now puts him just one point behind Prost's 18 points in the World Championship standings, while Lauda's loss of four vital points puts him five behind Watson. The quiet Ulsterman has always tended to remain in the shadow of Niki, both in his Brabham days and more so now with McLaren. *''Niki's the superstar''*, admits John: *''I don't think that me leading the Championship will make any difference to things. I thought a lot about being considered number two to Niki before I signed with McLaren, but I am happy and it doesn't bother me now.''*

With two wins to their credit out of five races this year, the McLaren team have also joined the ''Superstars'' of the Grand Prix world after a long period of being on the edge of success. Perhaps this win of John's, well driven and well earned, will be all that he needs to boost him into the ''Superstar'' league.

Niki Lauda might have been the quickest in practice with a place on the second row of the grid, but in the race he was forced to give way to his team-mate Watson who was much faster. Lauda chose to run softer tyres than Watson, which proved to be his downfall, but there was more to come...



... after taking third place in the race, Lauda was disqualified from the results when his car weighed-in just 2-kilos underweight. He had insisted that his car should be well up to weight to prevent just that, but his team played it too close. John Watson's car was right on the edge at 1-kilo over after the race.



EXTRA, EXTRA

JACQUES LAFFITE'S DOUBLE LIFE

ACCORDING to last winter's program, the JS19 Talbot-Ligier was due to make its debut at Imola. Planning called for: running the old JS19 with a V12 motor in Kyalami, running Long Beach and Rio with an intermediate JS17/19 equipped with a V12 engine and starting the JS19 turbo at the San Marino Grand Prix.

The problems encountered at Matra in December forced the team to reconsider completely their season, once it was ascertained that there was no counting anymore on the turbo engine. It was mid-January and the team had to put together a new JS19, entirely designed around the traditional atmospheric V12 motor. That meant a wad of over one thousand plans to go over from scratch.

The task was completed in less than four months, but in spite of the strange withdrawal at Imola, mainly with the purpose of hastening the debut of the JS19, the latter was not entirely completed until Thursday May 6th, late in the day. Originally, Guy Ligier and his men had hoped to undertake the first test run on Monday May 3d, so they could enter the first edition of the JS19 at Zolder... Some problems arose from parts which had been jobbed out, the most sizeable being a gear-box crankcase, which had been specially designed for the new car and was not received in Vichy until Tuesday May 4th, preventing the Monday test run. Delayed in their work while waiting for this essential part, the mechanics were unable to pursue construction on the car. The first test was postponed until Wednesday 5 then delayed again , this time on account of last minute body adjustment problems.

So it came to Thursday May 6th when the whole Talbot-Ligier test team, including Jacques Laffite and Jean-Pierre Jabouille got together on the Michelin track in Clermont-Ferrand. To no avail. Indeed Guy Ligier, who had already arrived at Zolder, learnt from the Belgian Commissioners themselves that, for the car to participate in the Grand Prix trials, it would be mandatory that it be presented to scrutineering before 9.20 a.m. on Friday. The deadline was too short and in order to spare the technicians who had worked night and day, the decision was made to give up.

Jacques Laffite and his team-mate Eddie Cheever, knew therefore they would have to drive once more the ageing JS17 at Zolder. However, Laffite's week-end promised to be a trifle more hectic than his team-mate Chever's. Eager to discover as soon as possible the flaws which might have been found in the first test runs, the Talbot-Ligier team decided to ship Jacques Laffite down to Clermont-Ferrand Friday evening, straight from first practice at the Belgian Grand Prix. After the first qualifying session, Jacques, still in his Nomex, jumps in a car. So do Jabouille, Guénard, Robin and chief mechanic Vizier, racing in the direction of Liège airport, where a private plane awaits them. The time: 2 p.m. and some odd minutes. At 5 p.m., they are in Clermont-Ferrand, where work on the car continues. Jacques slips into the cockpit at 7.30 p.m., does a total of 26 laps to see that the JS19 has no basic vices. That test is positive, everyone breathes easier, knowing that, after the Belgian Grand Prix, the JS19 will be ready for serious testing. Almost three days will thus have been gained, but meanwhile it is Friday night, nearly 9 p.m. Jacques and his companions hop again into their plane and land in Liège just before midnight. Next day, he must drive the JS17, but the extra strain was well worth it.

''The car seemed very quick; accurate'', says Laffite, *''its brakes are much more efficient than on the JS17, which might have to do with the difference in weight. As tested in Clermont-Ferrand, the JS19 weighed 580 kgs, as against nearly 610 for the JS17. It also holds the road far better, which makes it more trackworthy. Our main preoccupation, with an atmospheric engine, was to reduce our handicap in relation to the turbos, by giving it very sophisticated aerodynamics, thanks to some very intensive try outs in the St Cyr wind tunnels''.*

How many JS19 will be on the starting line in Monaco ?

Two, is the hope at Talbot-Ligier. Indeed, the second body to be used by Eddie Cheever arrived in Vichy soon after the San Marino Grand Prix. It must still be put together, as the parts get in. And, as Dany Hindenoch points out, *''it all depends now on the parts that were jobbed out. It does happen that some parts may come back not to specification and we have to send them back, which naturally, causes great losses in time''.*

Didier Braillon

THE RIGHT PLACE AT THE WRONG TIME

With 15-minutes left of official practice, Gilles Villeneuve sat in the pit lane, his concentration complete as his mechanics poured water over his tyres to cool them off for a final effort.
The pole was too far away for Gilles to be thinking about that. It was the 0,15 seconds that seperated him from Didier Pironi's Ferrari that he was after. They had not spoken together since their Imola confrontation. Beating Didier's time for the grid was all that mattered to him right now.
He moved out down the pit lane, drove slowly around the first lap warming his tyres for a flying lap which he started ten minutes before the chequered flag. He never finished that lap. As he crested the blind brow behind the pits he found Jochen Mass' March running slowly ahead, Jochen cooling his own tyres and watching his mirrors for traffic behind. Jochen saw Gilles coming fast just as Gilles realised Jochen was running more slowly ahead. Both drivers had a split second to make their decisions. For Gilles there was no question of braking, the lap would be lost. For Jochen there was a choice. Move left and put Gilles around the outside of him or move right and let him pass on the quicker line to the left.
Jochen moved to the right at the same time Gilles had decided to take the right. Time had run out.
The Ferrari's front left wheel struck the right rear wheel of the March launching the Ferrari high into the air at a speed close to 160 mph. The car came down nose first into the sandy edge of the track then bounced again over the barrier, off a bank and end over end back on to the track, the whole front end of the car was torn off, while Gilles was ejected from the wreckage after the second impact, his helmet also coming off in the accident.
Rescue teams were quickly on the scene. All that could be done was done, but his injuries were so serious that there was little hope of his survival. At 9.12pm the local hospital to which he had been taken announced that he had died. Motor racing had lost one of its finest.

Jeff Hutchinson

EMILIO DE VILLOTA: FRIDAY BLUES

« *OUR main problems were caused by wrong shockabsorbers and by the skirts. I spent half the 90 minutes of the first untimed session in the pits and I only did 18 laps. It wasn't enough to give me a hope of prequalifying.''*
Like Jarier, Paletti, Warwick, Fabi and Boesel, the Spanish driver Emilio de Villota was obliged to prequalify during the Friday morning session to get into qualifying proper — the rules saying the four fastest join the 26 who are automaticaly admitted to qualifying, and the others, two in Belgium, go home.
That was the case for Villota who like the others was driving a car entered by a constructor who did not win points last year.
The Spaniard's March 821 is in fact a semi-works car: *''It is maintained by Macdonald but managed at the track by Mike Earle, who worked in Formula One before with David Purley and then specialized in Formula Two. There is no discrimination between my car and those of Mass and Boesel''*. De Villota stressed, *''and all the components, notably the dozen motors, are pooled, However, at the moment I theoretically do not have the right to use the T-car, except in exceptional circumstances, if, for example, my engine blows at the end of the warm-up, forcing me to change cars for the race.''*
In fact, de Villota never really got to grips with his black March, which he said was too new to be competitive and needs a lot of testing miles. The week before Zolder, he did 130 laps at Imola:
''The car is good, but I have to get used to the current suspensins, or rather the absence of suspension, which creates very different reactions to those I knew in earlier cars. In fact, 1982 F1 cars are very easy to drive, but they are enormously demanding physically and one quickly gets exhausted.''
Why did de Villota, backed by several sponsors of which the principal is an American oil company starting to set up in Spain, LBT Synthetic Oil, choose a March rather than another car? The reply was simpe: *''I had no other choice.''*
But de Villota is planning to do the full season and taking it very seriously. He will go to Monaco with the LBT March after having had two private testing sessions at Silverstone and at the tortuous little track of Croix en Ternois in northern France.

Didier Braillon

PRACTICE

It was 6.40pm Thursday and a thick layer of grey cloud hung over a wet and cold Zolder paddock. Above the monotonous hum of the motor-home generators there came a louder hum from behind the trees which burst into a roar as the streamlined shape of **Gilles Villeneuve**'s new Agusta helicopter sped over the top of the pits low and fast. At the far end **Gilles** pulled it up into an almost vertical climb, its speed quickly dropping to almost nothing before he kicked the nose over into a perfect *chandelle* announcing his arrival to all below.

His anger with his team-mate **Didier Pironi** over what had happened at Imola two weeks before had still not subsided. ''I will prove what I have to say on the track'', he had said during Friday's

practice. And 24-hours later, trying to do just that, the fiery little Canadian, who brought so much to our sport, was lying critically injured in a nearby hospital.

We speak of the dangers in our sport, argue over proposals to make it safer, talk until it almost seems as though the talking will solve the problem and will make it go away. But it never does, and someone has to pay the price, leaving the rest of us standing in shocked silence contemplating the reality of those words.

For the Ferrari team, there was little else to do but pack away their cars and head back home to Italy. For the rest, there was still a race to run, the two

turbo-Renaults of **Alain Prost** and **Rene Arnoux** sitting on the front row of the grid after dominating Friday's timed session but coming close to losing the pole on Saturday afternoon.

It was not the turbo BMW Brabham of **Nelson Piquet**, third quickest on Friday, which almost took their pole away, but **Keke Rosberg**'s new Williams FW08, presumably underweight, just one tenth slower, for we had been told by the Cosworth runners that to run at 580 kilos would leave them all behind. One-tenth was hardly left behind.

But how would they perform in the race and get by the post-race weigh-in? We would have that question answered on Sunday, along with which tyres would be better here and how would the Renault's brakes take 70 laps of turbo power when there were already problems in practice.

Without the extra speed and no engine to aid their braking, the Renaults were not going to have it any easier here than anyone else, with or without weight differentials.

It was certainly not going to be easy for **Rosberg**'s new team mate **Derek Daly**. The second Williams sat back in the middle of the grid, **Daly** one of just three drivers who failed to improve on their Friday times. He was still feeling his way into the top end of the grid, doing well the first day, but unable to get the car to his liking on Saturday morning. A suspected broken valve spring forced him into the T-car for part of the second session and that put him even further away from the top 10.

It was again the cool Austrian, **Niki Lauda,** who made the running for the McLaren team. He made just one quick run on a new set of tyres before parking in the pits, confident that he could do no better, which was still good enough

for fourth. John Watson, was almost a second slower and had to make do with twelfth.

If some of the Ford cars were running light, then it is unlikely that **Michele Alboreto**'s Tyrrell was one of those, for **Ken Tyrrell** had already had his knuckles rapped on Friday when **Brian Henton**'s car weighed in 3 kilos underweight and his time was disallowed. **Alboreto** put up another impressive performance with the fourth fastest time on Friday and ended up fifth quickest the following day, underlining an already outstanding season. **Henton** was left back in 22nd place, thankful that the rain had held off in that final hour.

Didier Pironi would have been sharing the third row with **Alboreto,** but **Gilles'** accident as he tried to squeeze the extra tenth of a second out of an already used set of tyres to beat **Pironi**'s time ended Ferrari's hopes of any racing at Zolder.

Andrea DeCesaris led Alfa Romeo's challenge after **Bruno Giacomelli** injured his back on Saturday morning, although with a brave effort he still managed to improve his time but ended up almost two seconds slower than **Andrea,** well down the grid, and without much hope of lasting the race without more back trouble.

Lotus looked better here than they have done all season, both drivers more happy with their prospects, Mansell taking ninth fastest time and **Elio DeAngelis** 13th.

At one stage, in the final session, the Brabham team had no cars to give their drivers. **Nelson Piquet** saw his impressive Friday time slip lower and lower when the boost suddenly took a dive from his BMW turbo engine, while **Riccardo Patrese,** who had lost a bit of the stone guard which was sucked into his turbo on Friday, discovered that the damage was more serious than the turbo when his engine blew up on Saturday.

He used the T-car, which lost its engine early on in the final session while his race car was only ready a few minutes before the accident. A gearbox coupling problem put the clutch out of action when he had tried to go out at the start of the session.

Manfred Winkelhock was also plagued by clutch problems both days, but the aggressive and impressive German made the most of his car when it was working and set a creditable 14th best. He was also having to cope with the switch to Michelin tyres for this race, which he had not even been able to try before practice. The two ATS's looked terrible as they porpoised badly over the bumps, but they both qualified easily, **Salazar** just over a second slower, 20th on the grid.

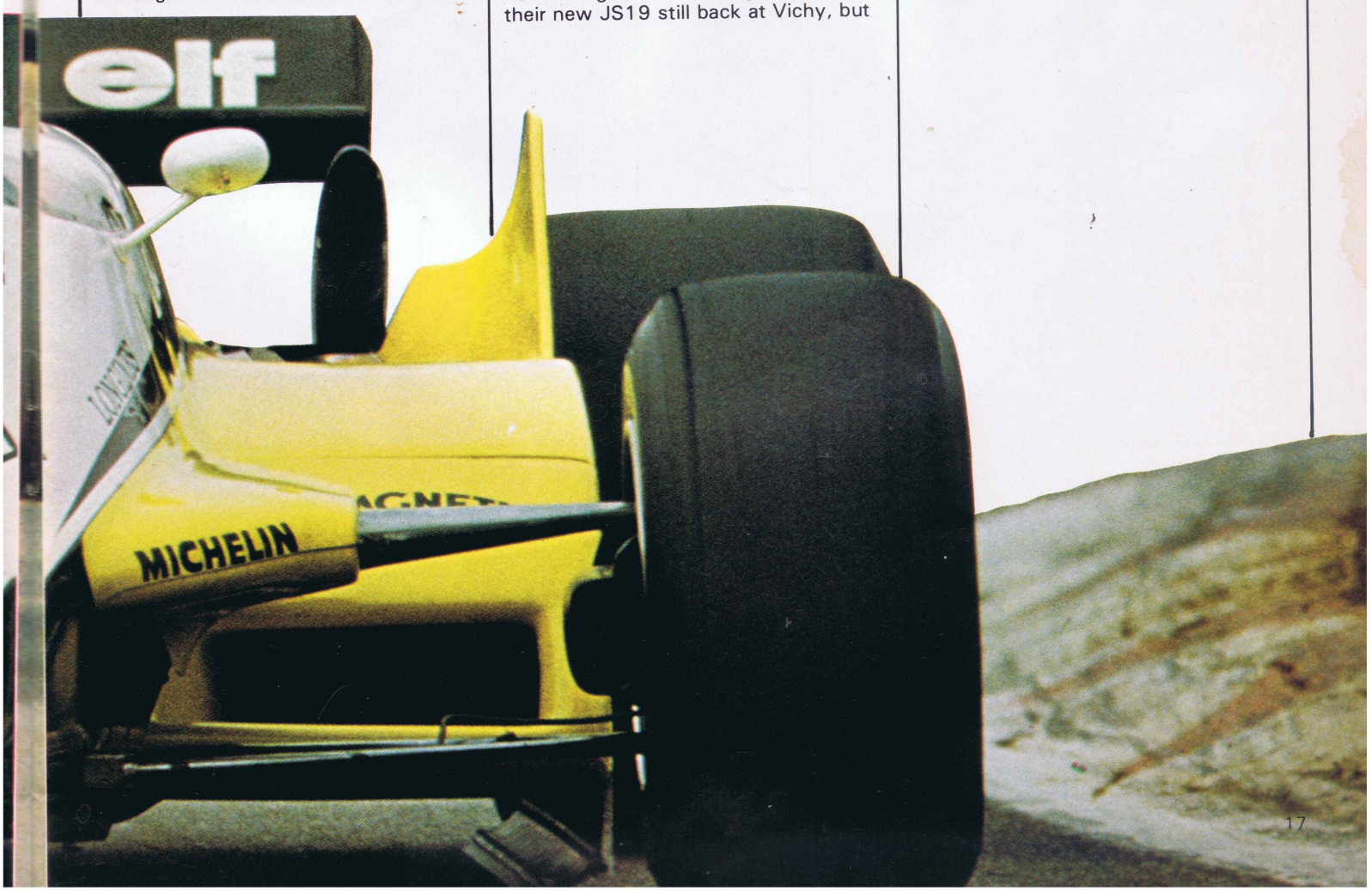
For the Ligier team, thoughts were on their new JS19 still back at Vichy, but which **Jacques** had tested between practice on Friday and Saturday. Cheever set the quickest time in the last ever practice for the JS17, Laffite's final run spoiled by an electrical problem after just one lap on qualifying rubber which Cheever had found to be slower than race rubber the previous day.

Both Tolemans made it onto the grid, **Warwick** with little problem, but **Fabi** after a frightening moment in the morning session when yet another suspension failure saw him off the road, fortunately not on a fast corner.'

Marc Surer did a good job in his first race for the Arrows team since his accident, his team-mate **Baldi** not making it on to the grid, although Ferrari's withdrawal left him a slot.

Chico Serra and **Rauel Boesel** were happy just to squeeze onto the back of

the grid, while **Jochen Mass** was, needless to say, heartbroken over the accident with **Gilles,** even though he was in no way to blame.



THE RACE

AFTER THE TRAGEDY... THE SHOW MUST GO ON.

photos: International Press Agency | Bernard Asset.

Ma

Remy
PLUS
Johnnie Walker

THE RACE

AFTER THE TRAGEDY... THE SHOW MUST GO ON.

photos: International Press Agency | Bernard Asset

DESPITE a pleasant change in the weather over Zolder on race morning, after the events of the previous afternoon there was not much enthusiasm for racing to be found among those who assembled in the paddock for the warm-up session.

The sun had brought other problems, like the choice of tyres. Some drivers went for the soft gamble, others a harder compound. It was to be a decision that would make or break their chances in the next two hours.

For some, their hopes were shattered long before that, like Giacomelli and Eliseo Salazar, victims of a start line pile-up before their race had begun.

It started with Mansell's Lotus, slow off the line because of a clutch problem. Giacomelli moved carefully around the stranded Lotus while those behind were less cautious as the traffic moved together from behind.

Up front, the duel into the first corner between Rosberg and the two Renaults had been an exciting one. Rosberg got the jump on Prost but Arnoux held his own. *''I got alongside, but then Arnoux turned on the power much earlier than I could and he pulled away easily.*

He didn't have to worry about Arnoux for long. Within four laps he was in trouble with a broken turbocharger butterfly valve and after a couple of stops at the pits he was out for good.

Prost was not doing much better either. His Renault was sliding more than he could handle and his brakes were already beginning to feel spongey. By comparison, Lauda looked to be having an easy time: he soon closed Rosberg's initial lead to a narrow margin... until lap 19, that is. Rosberg slid wide over a kerb. *''I know the gods must have been with me, for I must have damaged a skirt... and after that the car handled like magic''*, he said.

After a long struggle to get ahead of Patrese's Brabham (then holding fourth place behind de Cesaris), Watson moved ahead when Patrese made a mistake. John was soon closing on his team-mate Lauda, for about this time de Cesaris' luck had run out when his engine blew.

Watson's choice of harder tyres had proved to be *the* combination to have, for the MP4 was now closing fast, the quickest car on the track.

Prost dropped well out of it with two stops for tyres. Fabi had gone with no brakes, Warwick joining him with broken transmission. Jarier had a brief struggle with the two Ligiers, but that had sent him to the pits for tyres. Mansell was gone with his broken clutch, and de Angelis had been another quick stopper for tyres. Piquet took tyres, but kept his place now almost a lap down leaving just seven cars on the same lap by half distance. Patrese held his own behind Watson for fourth place, well clear of Daly who had worked his way up to fifth.

Cheever was going well in sixth spot, having a great battle with Laffite who had got ahead briefly only to have his

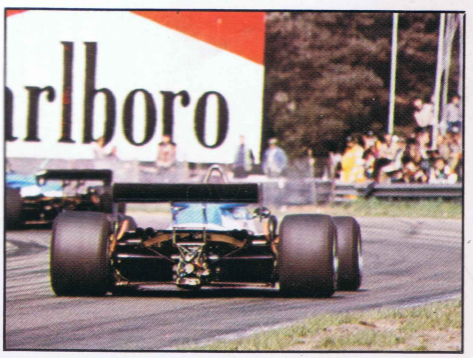
1. The two Renaults monopolise the front row, as usual. Making up the numbers to 26 after Ferrari's withdrawal are Mass (March) and Baldi (Arrows) (photo: Asset).

2. Rosberg manages to put his Williams between the two Renaults of Arnoux and Prost into the first corner (photo: DPPI).

3. Laffite's Ligier heads the second half of the field into the first corner. Winkelhock, with clutch problems, raises his arm (photo: Asset).

4. The Alfa Romeo of Bruno Giacomelli and the ATS of Eliseo Salazar clashed a few yards after the start, the result of Mansell's Lotus stalling with a damaged clutch (photo: Vandystadt).

5. The Renaults of Prost and Arnoux disappeared early after their promising practice (photo: Asset).



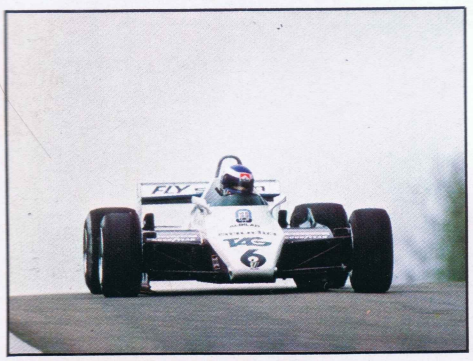
6. The ast race for the Talbot-Ligier JS17 model was an exciting one. Cheever fought his own team-mate Laffite for two-thirds of the distance (photo: IPA).

7. Both Tyrrell drivers dropped out with engine failure within four laps of each other. Henton walks home (photo: IPA).

8. De Angelis leads Jarier. Both cars made pit stops for fresh tyres (photo: Asset).

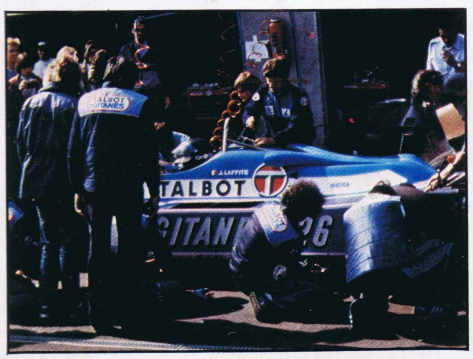
9. In spite of his Fittipaldi's damaged front wing, Chico drove an excellent race, scoring his first-ever point after Lauda's disqualification (photo: Asset).

10. Patrese/Watson, Brabham-BMW/ McLaren-Ford: the best battle of the race. Wattie seized his chance to go ahead as they lapped back-markers (photo: IPA).

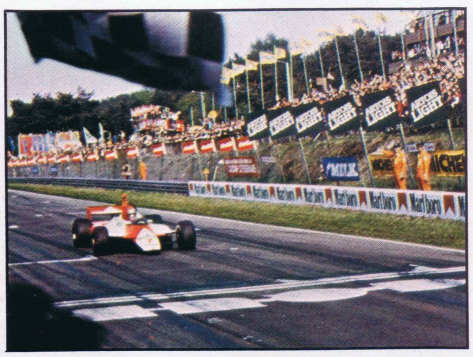


11. Rosberg commands the first part of the race with his new Williams FW08. He was forced to drop back later with brake and tyre trouble... (photo: Asset).

12. ... his lead over Watson's McLaren then melted away like snow in the sunshine (photo: IPA).



13. Having passed his team mate Cheever, Laffite ran wide and had to make a stop to change a damaged skirt (photo: IPA).



14. John Watson takes the chequered flag. He slized the lead only two laps from the end to score the 3rd championship victory of his career (photo: IPA).

15. Number 7... Up on the podium (photo: DPPI).

16. For the ceremony, though, Wattie chooses champagne. But the scrutineers later wiped the smile from the face of team-mate Lauda (photo: Asset).

motor go sick. A mistake at the end of the straight saw him slide wide and damage a skirt. Cheever did not have to worry about another challenge, while Jacques dropped further behind and finally went to the pits for a long stop to change the skirt.

Alboreto had been running another strong race holding sixth place behind Watson until shortly before half distance, but his race came to a sudden end when his engine blew, just as Henton's had done four laps earlier.

By lap 45 all eyes were on Watson as he closed the gap to just over a second on Lauda whom he had no trouble passing two laps later. *''By that time I was so much quicker on my tyres that he moved over and let me go''*, said John.

Niki was now more worried about his own brake problems and a left rear tyre which was no better than Rsberg's Goodyears.

Any chance Rosberg had to back off was gone when he saw pit signs telling him of Watson's charge. He had to drive flat out again, this time fighting a losing battle.

With 15 laps to go he still had 15 seconds advantage, but Watson was closing at more than a second a lap and his brakes and tyres were getting worse. *''I was also having problems with backmarkers. I couldn't outbrake them and it cost me a lot of time to get by''*, he said.

With ten laps to go the gap was down to 8 seconds, but Keke got a couple of laps breathing space when Daly crashed as he fought out the same battle for fourth place with Cheever. Daly's rear brakes locked, sending him off into the fences.

''I thought it was Keke's car in the fence, so I backed off'', admitted Watson, giving Rosberg another two seconds back before he realised the truth. But even that was not enough.

With two laps to go Rosberg slid wide trying to get around Surer and Watson was through to the lead. Rosberg had to make do with second again, made easier by the later news that Lauda, by now the only other driver on the same lap as the leaders, was disqualified from third place after the post-race weigh-in. So Cheever moved up to third, a lap down, de Angelis was fourth after a great come-back drive hampered further by a broken exhausdt pipe. Piquet brought the BMW engine its first points in its second race after Patrese slid off the road on a slippery turn two: this had also claimed Prost before the finish.

A bent front spoiler and a gearbox problem did not stop a delighted Chico Serra from picking up his first ever championship point for sixth place, while Marc Surer did a brave job in his first race since his accident to finish seventh. Boesel took eighth and Laffite ninth to complete the classified list of finishers. The only other car still running at the end was Baldi's Arrows, but out of the results after a long stop to clean out throttle slides jammed with sand after an ''off''.

Zolder statistics

BELGIAN GRAND PRIX

Date : 9 May, 1982
Circuit : Zolder
Circuit length : 2.648 miles, 4.262 kms
Race distance : 70 laps, 185.38 miles, 298.34 km
Weather : sunny
Attendance : 55,000

STARTING GRID

PROST
Renault RE 30B
1'15"701

ROSBERG
Williams FW08
1'15"847

ALBORETO
Tyrrell 011
1'16"308

MANSELL
Lotus 91
1'16"944

PATRESE
Brabham BT50-BMW
1'17"126

DE ANGELIS
Lotus 91
1'17"762

DALY
Williams FW08
1'18"194

GIACOMELLI
Alfa Romeo 182
1'18"371

LAFFITE
Talbot-Ligier JS17
1'18"565

WARWICK
Toleman TG181
1'18"985

FABI
Toleman TG181
1'19"300

SERRA
Fittipaldi
1'19"598

MASS (1)
March 821
1'19"777

ARNOUX
Renault RE 30B
1'15"730

LAUDA
McLaren MP 4B
1'16"049

DE CESARIS
Alfa Romeo 182
1'16"575

PIQUET
Brabham BT50-BMW
1'17"124

WATSON
McLaren MP 4B
1'17"144

WINKELHOCK
ATS HGS 1
1'17"879

CHEEVER
Talbot Ligier JS17
1'18"301

JARIER
Osella FA1C
1'18"403

SALAZAR
ATS HGS 1
1'18"967

HENTON
Tyrrell 011
1'19"150

SURER
Arrows A4
1'19"584

BOESEL
March 821
1'19"621

BALDI (1)
Arrows A4
1'19"815

Did not qualify :
MASS (March 821) 1'19"777 - **BALDI** (Arrows A4) 1'19"815 - **GUERRERO** (Ensign N181) 1'20"116 - **LAMMERS** (Theodore TY02) 1'20"584.

RESULT

1.	**Watson**	McLaren MP 4B	70 laps in 1:35'41"995, 116.12 mph
2.	**Rosberg**	Williams FW08	7'268" behind
3.	**Lauda** *	McLaren MP 4B	
4.	**Cheever**	Talbot-Ligier JS17	1 lap behind
5.	**De Angelis**	Lotus 91	2 laps behind
6.	**Piquet**	Brabham BT50-BMW	3 laps behind
7.	**Serra**	Fittipaldi F8D	3 laps behind
8.	**Surer**	Arrows A4	4 laps behind
9.	**Boesel**	March 821	4 laps behind
10.	**Laffite**	Talbot-Ligier JS17	4 laps behind

* Lauda, McLaren MP4, third, disqualified, 2 kilos under weight.

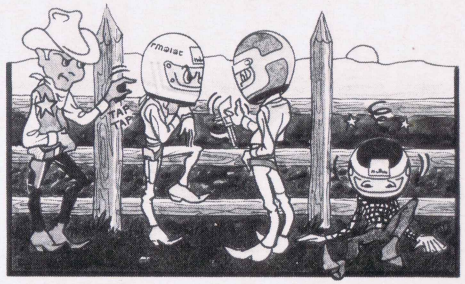
PREVIOUS WINNERS

(Last five races)

1977 : NILSSON (Lotus-Ford)
1978 : ANDRETTI (Lotus-Ford)
1979 : SCHECKTER (Ferrari)
1980 : PIRONI (Ligier)
1981 : REUTEMANN (Williams FW07)

F1 CONSTRUCTOR'S CUP

1. McLaren 29pts - **2**. Renault 22pts - **3**. Williams 20pts - **4**. Ferrari 16pts - **5**. Tyrrell 10pts - **6**. Lotus 9pts - **7**. Brabham 6pts - **8**. ATS et Talbot-Ligier 4pts - **10**. Osella 3pts - **11**. Fittipaldi 1pt.



OFFICIAL QUALIFYING TIMES

	Friday	Saturday
Prost	1'15"962	**1'15"701**
Arnoux	1'15"903	**1'15"730**
Rosberg	1'17"654	**1'15"847**
Lauda	1'17"577	**1'16"049**
Alboreto	1'17"334	**1'16"308**
Pironi	1'18"796	**1'16"501**
De Cesaris	1'17"696	**1'16"575**
Villeneuve	1'17"507	**1'16"616**
Mansell	1'17"614	**1'16"944**
Piquet	**1'17"124**	1'17"535
Patrese	1'18"366	**1'17"126**
Watson	1'18"639	**1'17"144**
De Angelis	1'18"655	**1'17"762**
Winkelhock	1'19"430	**1'17"879**
Daly	**1'18"194**	1'18"591
Cheever	1'20"182	**1'18"301**
Giacomelli	1'18"425	**1'18"371**
Jarier	1'20"056	**1'18"403**
Laffite	1'19"403	**1'18"565**
Salazar	1'20"440	**1'18"967**
Warwick	1'20"594	**1'18"985**
Henton		**1'19"150**
Fabi	1'20"541	**1'19"300**
Surer	1'22"512	**1'19"584**
Serra	1'21"775	**1'19"598**
Boesel	1'20"522	**1'19"621**

PROVISIONAL DRIVERS' WORLD CHAMPIONSHIP STANDINGS

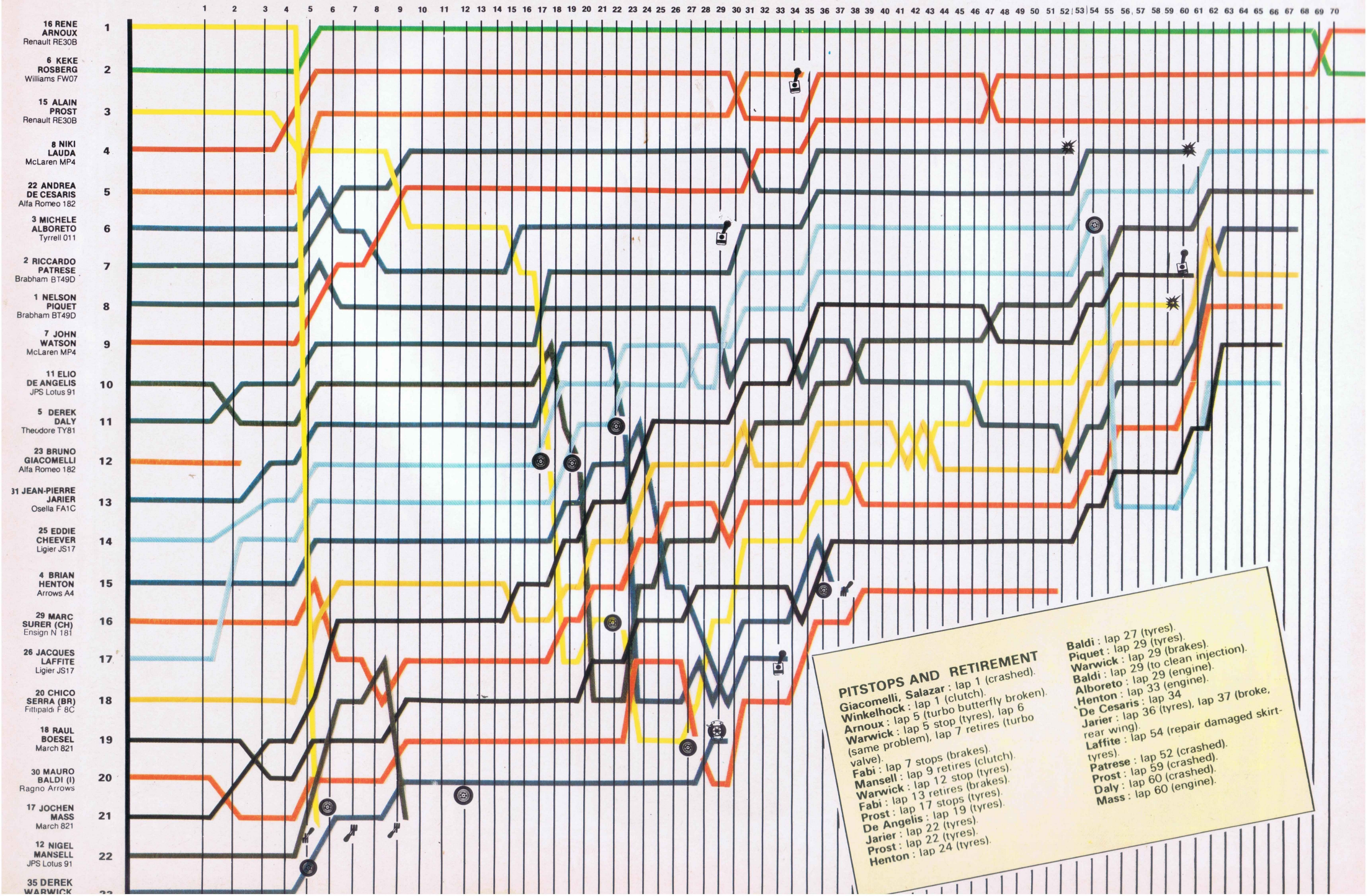
(After South Africa, Brazil, US West, San Marino and Belgian GPs)

1.	**A. Prost**	9	9	—	—	—	18
2.	**J. Watson**	1	6	1	—	9	17
3.	**K. Rosberg**	2	—	6	—	6	14
4.	**N. Lauda**	3	—	9	—	—	12
5.	**D. Pironi**	—	1	—	9	—	10
	M. Alboreto	—	3	3	4	—	10
7.	**C. Reutemann**	6	—	—	—	—	6
	G. Villeneuve	—	—	—	6	—	6
9.	**E. de Angelis**	—	—	2	—	3	5
10.	**R. Arnoux**	4	—	—	—	—	4
	N. Mansell	—	4	—	—	—	4
	R. Patrese	—	—	4	—	—	4
	E. Cheever	—	—	—	—	4	4
14.	**J.P. Jarier**	—	—	—	3	—	3
15.	**E. Salazar**	—	—	—	2	—	2
	M. Winkelhock	—	2	—	—	—	2
17.	**N. Piquet**	—	—	—	—	2	2
18.	**C. Serra**	—	—	—	—	1	1

THEIR FASTEST RACE LAPS

	Time	Lap
Watson	1'20"214	67
Rosberg	1'20"797	46
Lauda	1'20"885	15
Cheever	1'20"789	60
De Angelis	1'21"557	48
Piquet	1'22"284	26
Serra	1'23"520	11
Surer	1'24"564	13
Boesel	1'25"061	10
Laffite	1'20"549	45
Watson	1'20"214	67
Rosberg	1'20"797	46
Lauda	1'20"885	15
Cheever	1'20"789	60
Daly	1'20"995	60
Mass	1'22"934	21
Prost	1'21"223	44
Patrese	1'21"709	47
Baldi	1'24"945	49
Jarier	1'22"508	15
De Cesaris	1'20"689	16
Henton	1'23"018	21
Alboreto	1'21"732	17
Warwick	1'23"148	5
Fabi	1'25"688	3
Mansell	1'22"506	8
Arnoux	1'22"918	3

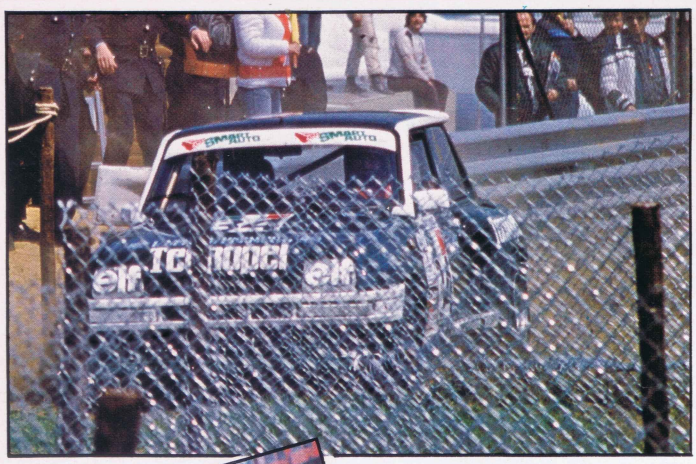
le - Lap by lap - Giro per giro - Runde um runde - Tour par tour - Vuelta a vuelta - F



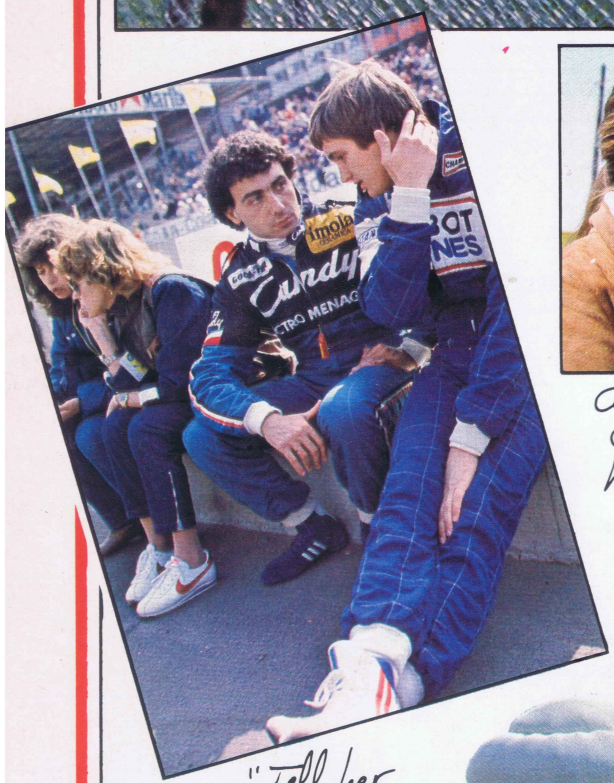
PITSTOPS AND RETIREMENT

Giacomelli, Salazar : lap 1 (crashed).
Winkelhock : lap 1 (clutch).
Arnoux : lap 5 (turbo butterfly broken).
Warwick : lap 5 stop (tyres), lap 6 (same problem), lap 7 retires (turbo valve).
Fabi : lap 7 stops (brakes).
Mansell : lap 9 retires (clutch).
Warwick : lap 12 stop (tyres).
Fabi : lap 13 retires (brakes).
Prost : lap 17 stops (tyres).
De Angelis : lap 19 (tyres).
Jarier : lap 22 (tyres).
Prost : lap 22 (tyres).
Henton : lap 24 (tyres).
Baldi : lap 27 (tyres).
Piquet : lap 29 (tyres).
Warwick : lap 29 (brakes).
Baldi : lap 29 (to clean injection).
Alboreto : lap 29 (engine).
Henton : lap 33 (engine).
De Cesaris : lap 34
Jarier : lap 36 (tyres), lap 37 (broke, rear wing).
Laffite : lap 54 (repair damaged skirt-tyres).
Patrese : lap 52 (crashed).
Prost : lap 59 (crashed).
Daly : lap 60 (crashed).
Mass : lap 60 (engine).

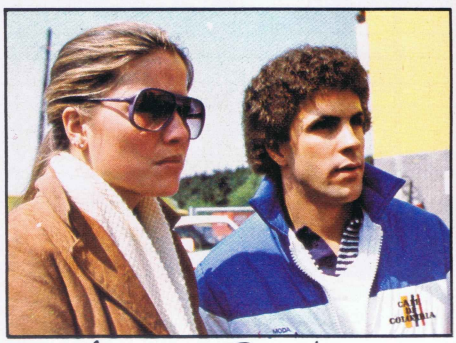
Postcard from Zolder



If funny fish is caught in the net



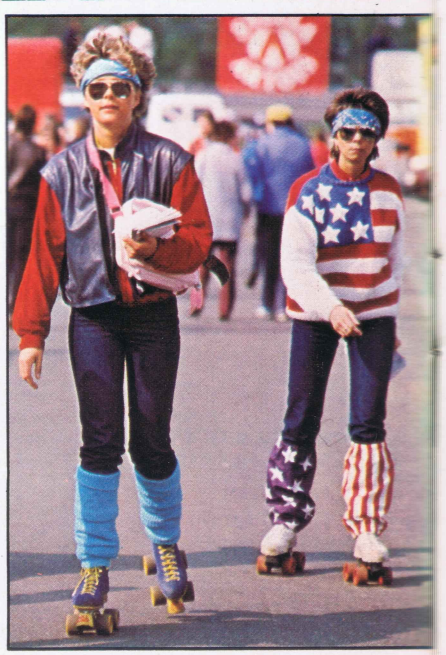
"Tell her you're a racing driver, that'll do the trick"

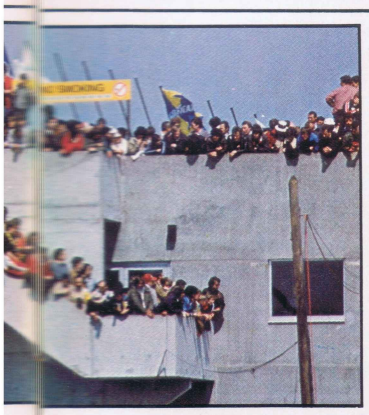


Colombian Roberto Guevero with Katie, his californian fiancee.

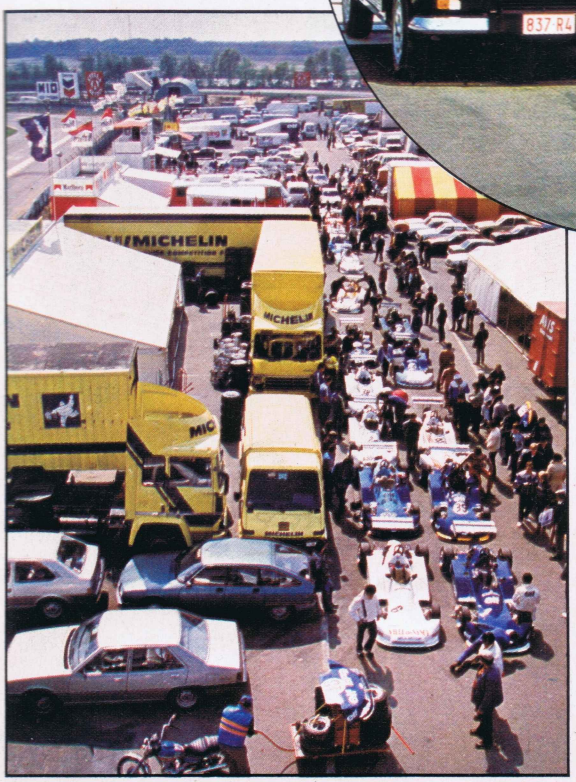
Transporters dusted behind the new pits

Doesn't look like a genuine American ...



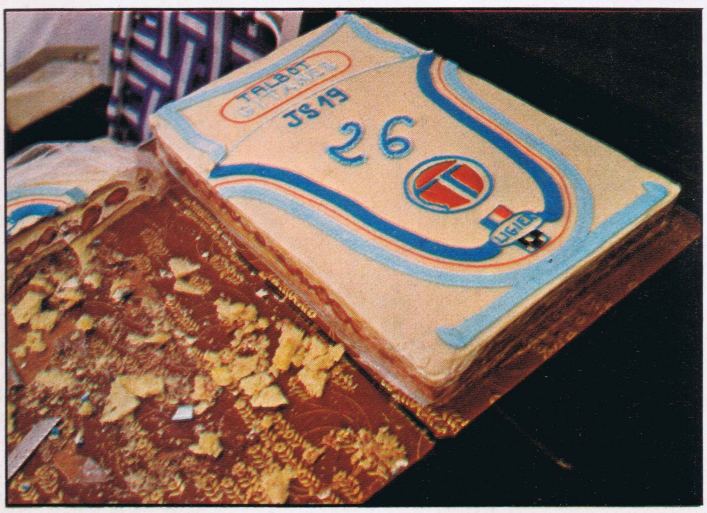


Siobhan Daly and Keke's girlfriend Yvonne, new "team mates".



Renault R4s on the grid. They lasted a few laps longer than the RE30Bs!

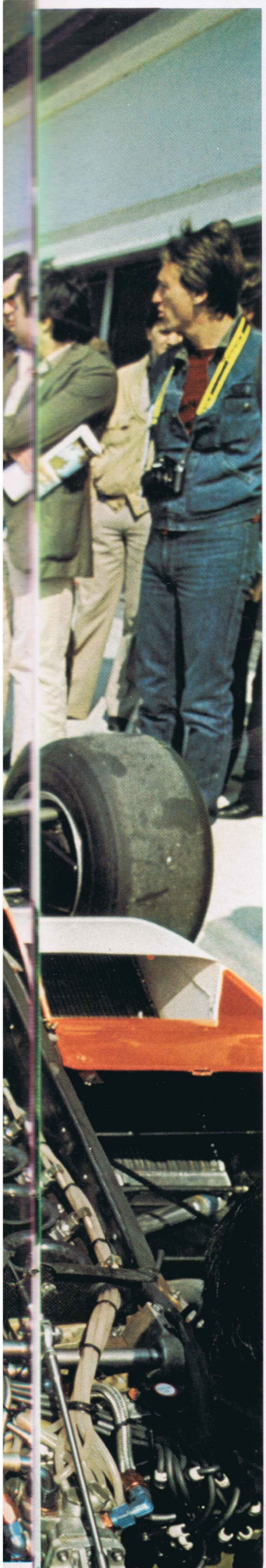
Zolder's new pit lane is almost as wide as Piccadilly.



Will the new Ligier cake-walk GPs when it's ready?

"And then I got him on the outside of the flat Right-hander..."

Marlboro
Alfa Romeo
MAGNETI MARELLI
CHAMPION
PIAGGIO



Gordon Murray has become "Mr. Brabham" and Patrick Head, "Mr. Williams". Gérard Ducarouge might not make it to "Mr. Alfa": his part, for the time being, is that of the Messiah...

GERARD DUCAROUGE: "A MARVELLOUS JOB FOR AN EGOTIST"

First known at the catalyst of Matra's great prototype adventure and then as the one-man-band at Ligier, Gérard Ducarouge suffered the most inexplicable firing in the history of Formula One last summer.
He was welcomed as a saviour at Alfa Romeo where he has created the excellent 182, one of the best of the current crop of Grand Prix cars.
His overwhelming passion for auto sport is sometimes, he says, detrimental to his home life and his health. Because the creation of an F1 car is, in his words, "a marvellous job for an egotist..."

By Didier BRAILLON

WHEN I arrived at Alfa Romeo, Andretti and Giacomelli were fighting for 15th or 16th place on the grid, three seconds off the fastest times. This situation stimulated me because I was convinced I could develop the cars very quickly. In fact, that was very largely what led me to choose Alfa rather than Lotus — which by the way I consider to be a team which is too rigidly enclosed in a very structured framework and where I would have found it very difficult to express myself. This was the more so because Lotus wanted to make me the "race engineer", that is, someone who manages the car at the track without really being involved in the design department. I also had contacts with Toleman, Fittipaldi, an to a certain extent, Ferrari."

It was never really clear, before the "Ducarouge era," who designed the Alfas.

"In fact, it is very complicated and even now I don't really understand hat happened. It appears to me that until then, Alfa never really designed a car. There were a multitude of sub-contractors: one designed the chassis, another, which was SERA (the French aerodynamic experts) the bodywork, a third the suspension components, and so on. What astonishes me is that such a system worked, more or less. Everything was in a sort of fog from which no one person emerged to give orders, be they general principles, the specifications of the cars or anything else."

"That is why, when I put myself at Alfa's disposal to try to give them the benefit of my experience of racing, I did not take anyone's job. I very quickly reached agreement with Carlo Chitti to work under a 'consultancy' contract which I hoped to see transformed later into a permanent contract. By the way, because of incredibly complicated administrative bureaucracy, I only signed that definitive contract, just before Imola."

When Gerard started to work on the cars in the middle of last season, how did the team, with its prestigious name and certain traditions, accept him?

"Very well as far as certain members were concerned, old hands from sports-prototype of Formula One days that I'd been meeting regularly at the circuits for the past 10 years, but others were suspicious. But that was a very natural attitude because I had come in from outside, with a certain reputation, and enormous things were expected of me. All those people wanted was for things to work, and from the first testing session with the 179 that I had started to modify, I was accepted.

"Great progress was seen to be made, and that was what counted. We clicked very quickly, despite a few little language problems. My Italian is rudimentary, I learned it on the job without any time for book-learning!"

The modifications to the 179 were just the first steps. What was important for Ducarouge was to design a completely

→

new car, using all his knowledge. The 182 appeared at the Brazilian G.P.

"After having put a spanner in the works by modifying the 179, there was a somewhat agitated period for me before I got the go-ahead to build another car. It was then that I sensed there were certain powers in place, and that it would be more difficult than expected to fit myself into the system at the highest level. In fact, it was the lower echelons who pushed me on, but the President and Vice-President of Alfa Romeo had certain problems, and people's responsibilities were still vague. What were they going to do with Engineer Marelli, for example?"

In practical terms, how was the 182 created?

"I cooperated with two Alfa technical designers who, while not being racing car specialists, were extremely competent. When I asked them to draw a certain piece of mechanism, they immediately chose the correct bearing or the right gauge of metal and made nice pieces. My role was to 'define' the car: track, wheelbase, suspension geometries. And then I laid down all the basic shapes, which means I spent my life behing a drawing board.

"I wasn't obliged to hold a pencil all the time, but from start to finish I controlled each line, the shape of every piece. And everything went very well, because what I asked for was never questioned. When I defined a rocker arm, for example the staff drew it without trying to impose their own opinions. That's one of tne reasons the 182 was designed in record time.

"Nothing, absolutely nothing, was questioned and work progressed at record speed. The fact that the designers had no experience with racing cars was a plus: they had no preconceived ideas. And *that* Alfa, contrary to its predecessors, was born entirely in the Autodelta design offices."

But there was nevertheless a constraint: work on the basis of the 179 chassis, in carbon fibre.

"Yes, in fact, the chassis was practically made without my knowledge because the order had already been placed in England and the carbon fibre monocoque was virtually a copy of the 179 in aluminium. When we received the first unit, we tested it by measuring it in torsion and on that basis, I had some indispensible modifications made for the following chassis which would become the 182: thinner carbon fibre at certain points to save weight, moving the anchor points for the suspension, a new design for the front anchor plates, a different fuel tank design. But the work of 'adapting' a 179 carbon chassis was much greater than might be thought, if only because virtually all the drawings had to be re-made. As for the rest, everything was new: I completely redesigned each piece, including the gearbox, and not a single bolt from the 179 was adapted to the 182."

Gerard designed a new gearbox. Was it absolutely necessary?

"My objective, because the Alfa box used Hewland 'guts', was to move the linkage to the top from the bottom of the box, where it prevented using a V-shaped fairing which was aerodynamically very pure. The housing and all the linkage mechanism are totally new. It's a little luxury I allowed myself."

Designing a car entirely for as well-known a company as Alfa Romeo after being summarily dismissed by Ligier was a daring bet. Ducarouge had no margin for error.

"It is certain that in agreeing to design the 182 I had completely committed myself. Once the decision was taken, I didn't sleep for two weeks. I was sure that if I failed, I would never dare look in the face again those who gave me so much support last summer, and that my career in Formula 1 would be over. I would simply have had to pack my bags and slink out the back door. That's why, when we did our first tests of the 182 at Ricard and Bruno immediately did a 1'2, I felt much better. Designing an F 1 amounts to putting your career on the line every time. And I wasn't at Alfa in the best conditions : I didn't know either the team or the drawing staff, and for four to five months, I hadn't slept more than two or three hours per night, getting through solely with tranquillizers.

"I was really at the limit of my physical resistance and twice, I fainted in the workshop... "

And how did he manage to get rid of the 'colourful' image which the team had?

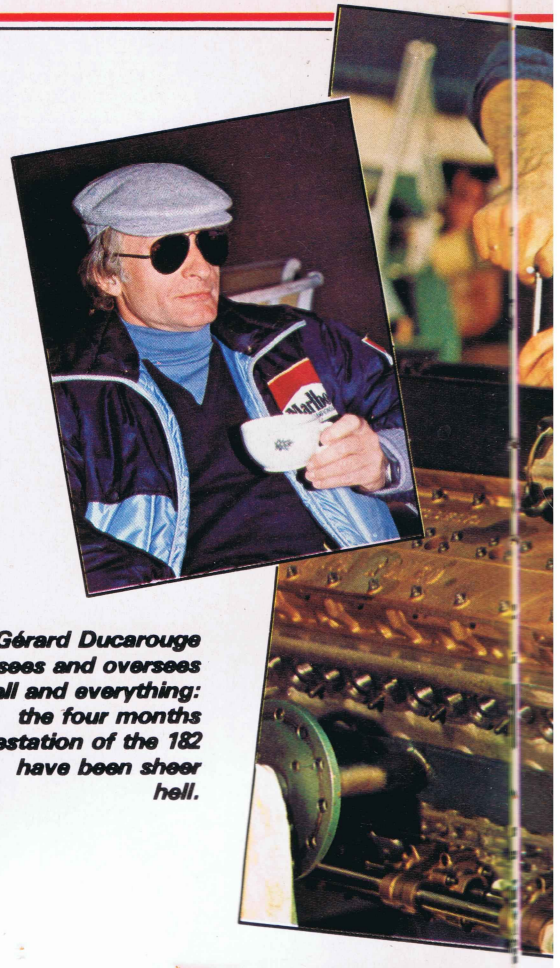
"Very easily, I hardly had to ask anything because everyone was very motivated and wanted to win. I think I was a sort of catalyst. The cars are beautiful, the pits are clean, the truck is organized. Last year if a sow had climbed into the truck, she wouldn't even have been able to find her piglets!

"That said, it mustn't be thought I've got an easy life. The Alfa team, which everyone imagines is very big, is in fact very small and as at Ligier, I'm obliged to do everything and be everywhere at once. In fact, I believe I have more work than before!"

When the two new 182s were loaded for Rio, it was the great adventure. They had hardly turned a wheel.

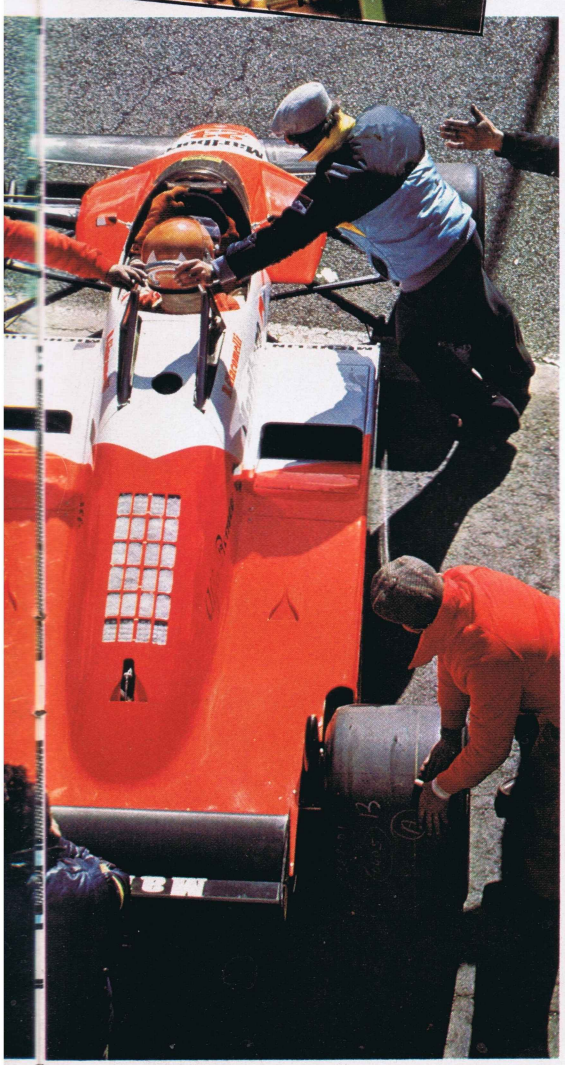
"Putting a car into competition that hasn't covered a big mileage is the disagreeable side of the story -- reliability, for instance, only comes after several thousand miles. And in Rio, we payed for it with a host of small problems. The pontoons, for example, flexed a little because their supporting structure, which I had thought was strong enough, wasn't. The first day of practice was torture: the car wouldn't go at all and I couldn't understand why. The next day we worked again and during the evening I discovered two major aerodynamic problems. Sunday morning, during the warm-up, Andrea did the second fastest time with full tanks. And at Long Beach, we learned a little more because we had gone to test at Willow Springs a few days earlier. "

Then there was pole position for De



Gérard Ducarouge sees and oversees all and everything: the four months gestation of the 182 have been sheer hell.

Alfa 182 belongs to the generation of "highborn" one-seaters. Its main handicap is now its excessive (and illegal) light weight.



Cesaris at Long Beach and his great early race, but things did not go so well at the San Marino race at Imola.

"I was rather expecting it because we lost an awful lot of time building a new chassis and repairing Bruno's. The car Andrea crashed was a complete write-off and we simply threw it in the garbage can!

"And then there was this new application of the rule on the 580 kilo limit: I had to add on 40 kilos of lead. It is a total aberration -- in fact, it's rather dangerous because the car was not designed for that. Our relative uncompetitiveness at Imola is thus very explicable. If it had not been for the two accidents at Long Beach, there would already have been a develoment car with a host of modifications including new pontoons. I've got the modifications in my sketchbook, but what was needed was to get them onto the track immediately. We cannot delay. And we have to work unceasingly and in parallel in the wind-tunnel, either the quarter-scale tunnel at St. Cyr in France or the full tunnel at Orbassano."

Are Bruno Giacomelli and Andrea de Cesaris drivers who are really capable of winning?

"Bruno has already proved a lot of things: he led for a long way at Watkins Glen in 1980 and he had an excellent finish to the 1981 season. If he hadn't spun at Las Vegas he would have been very close to the winner. That said, I don't yet know him very well, and that's even truer for Andrea who has already pleasantly surprised me; he merits a lot better than his reputation of the end of 1981 after a disastrous season."

They are capable of winning, but can they develop their car rapidly and positively?

"Yes, they both are very attuned to the reactions of their car. It what I call 'having a sensitive backside.' But it's certain they don't have enormous experience.

Did Ducarouge intervene when the drivers were chosen?

"Absolutely not, firstly because a technical chief is never asked for his opinion on the subject, and further, because the choice was practically made at the end of the season when I got the green light to build a new car for 1982. The only other possibility that I heard discussed came from Elio de Angelis. But I repeat, I have no worries about the quality of my drivers. We're close, and we meet as a threesome as often as possible so the data will circulate quickly. After practice, during a debriefing, there are four of us, because I've taken on a young engineer to help me at the track. He's called Bizzarini and he's the son of the constructor who entered two cars in the Le Mans 24 Hour race in 1966. He is very young and inexperienced, but like Engineer Colombo he's loaded with talent and extraordinary enthusiasm. When I leave Alfa, they will certainly be able to take over. I'll have the feeling of leaving something behind me...

'When I leave Alfa,' Ducarouge had said.

"Yes, it's inevitable some day or another. You must give people the opportunity to live their own adventure. Today, I'm the person who is contributing his experience, and training those with whom I am working. But in three, four or five years, I'll go, it's inevitable.

"And I can't really see myself living in Italy definitively. I consider this a transitional period and my life at the moment, something like that of a monk, is far from agreeable. I leave my little apartment in Milan early in the morning and return as late as possible. Il have no idea what's going on around me. The only route I know in Milan is that between my apartment and Autodelta. Frankly, I didn't realize at the start that it would be so tough: my wife has stayed in Paris and we see each other once a month. You really have to have a limitless selfish passion to sacrifice yourself to that extent."

And in three, four or five years, what will happen? Does Ducarouge already have plans?

"Yes, a head full and I am often in touch with other teams. If I left Alfa tonight, I would already know what to do and I have no worries in that respect. But my dearest wish is to return to France to work in a Formula 1 team."

Not Ligier, after all! After his 'firing' last summer, for which he still does not know the reason, Gerard could not decently return to that team...

"Perhaps I'll know the truth in 20 years but for the moment, I have no idea of the deeper reasons for it. And there is something on which I'd like to express myself clearly: the accusation that I did not 'delegate my powers.' Firstly, if I didn't 'delegate,' it was because I was alone. Secondly, when Guy Ligier justified his action in saying that, he did so at the worst possible moment, because if the first half of the 1981 season was very bad, it was precisely because I tried anyway to 'delegate.'"

Isn't this lack of 'delegation' one of the reasons that Ligier has never been able to keep its cars competitive for a full season?

"Evidently not, but the fact that we had bad periods is nonetheless very explicable. I asked Guy Ligier, for years, to create a testing testing, but he always replied: 'listen, I can't even buy a new gear ratio.' And when I wanted to hire a team manager it was the same refrain. But what nobody knows is I did everything not as a policy, but because I was alone. Hotel bookings, travel arrangements, FOCA meetings, FISA meetings, technical meetings, the workshop, that was all down to me. I was everywhere!" □

F1: WHAT DOES

It's a question you've asked time and again after hearing in astronomical figures given by the sponsors of the different teams in the World Championship. We carried out a little survey with different team managers in order to establish a "price list" for the various components of an F1 car.

by Giorgio PIOLA

WE ONLY considered the case of cars using the traditional Ford Cosworth, because it is impossible to put a figure on the investments of the teams like Renault and Ferrari which use turbo engines they build themselves.

The result is a very impressive figure which bears witness to the almost incredible escalation of cost — something like 170,000 dollars for the car alone, to which must be added 2.5 million dollars to run it for the season.

That is a low figure, too. Frank Williams'current budget is around 8 million dollars and he has a staff of 90. Formula 1 car are sometimes built "in series" and the traditional English single-seaters have reached a high degree of sophistication which has rapidly doubled the price of a car "ready to run". Extensive use of materials borrowed from aeronautics and the need for chassis that are increasingly strong while simultaneously lighter have ended for ever the era of improvisation and backyard building.

It was still possible last year to race with traditional monocoques in aluminium costing under 7,000 dollars, but today, nobody talks of anything but chassis built in composite materials such as honeycomb and carbon fibre which cost from 20,000 to 60,000 dollars.

The return from such investment is a monocoque weighing about 30 kilos (66 pounds) with torsional rigidity of 1,000 kilos per square millimetre.

The new degree of sophistication has many implications. The time when an English constructor bought a Cosworth and a Hewland gearbox, and built a stereotyped chassis and running gear has gone. Every component must be developed to the limit if the car is to have a chance for a win. All the teams watch each other very closely, not afraid to copy ideas and develop them on their own cars.

A few years ago, all the cars except Fer-

S A CAR COST ?

rari ran a standard Hewland box. Now, because of aerodynamics and in order to reduce the width of the rear of the car by a maximum, many teams build their own version of the box. with Hewland internals in the narrowest possible cover.
That is another cost increase factor of anything from 4,000 to 16,000 dollars. But it is the research into weight reduction which has really increased the price.

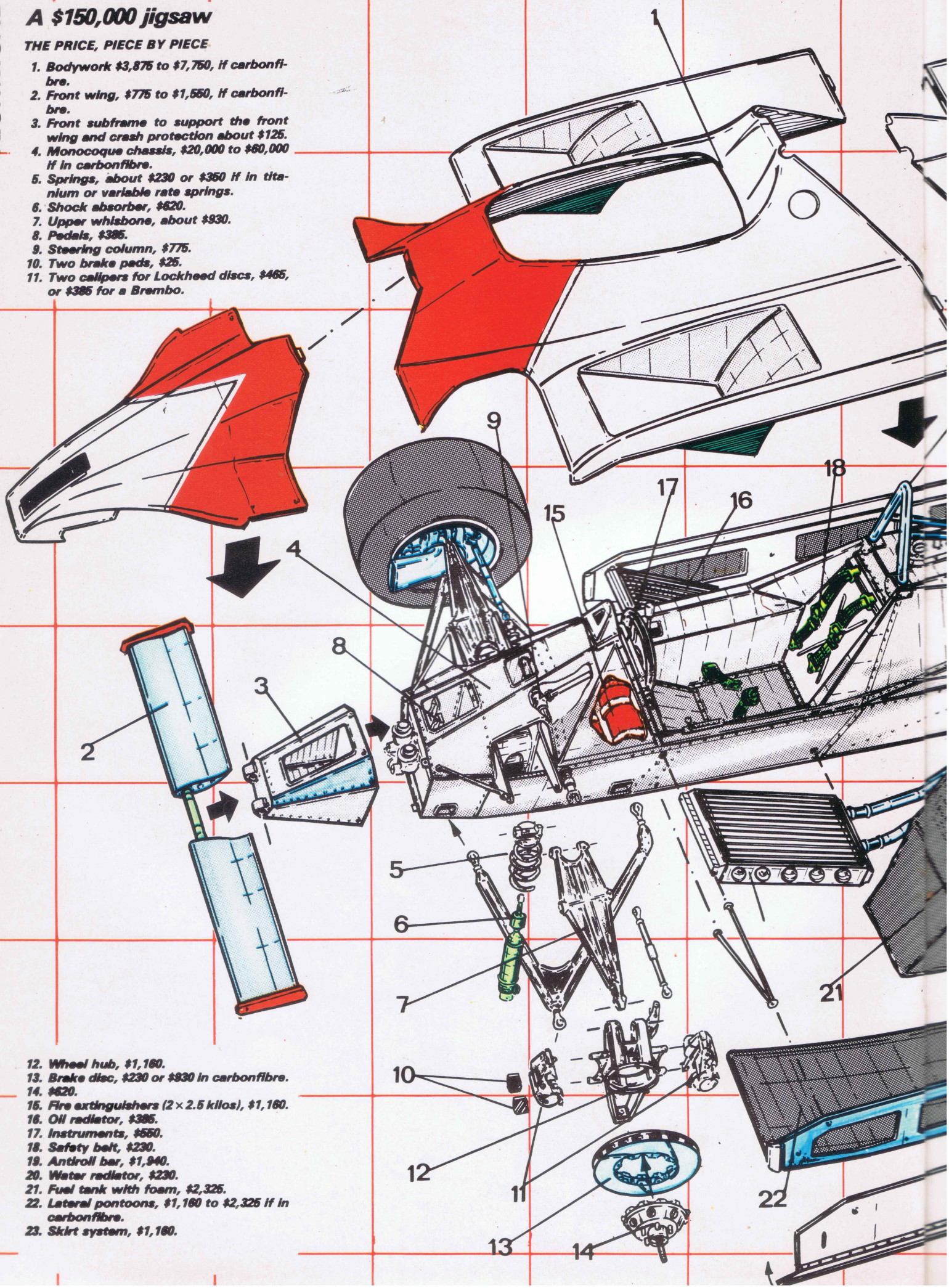
The inherent costs have increased directions: theoretical work with a rise in man-hours and an increased use of computers for the design of each piece, and construction, using ever more advanced technology. Many pieces which used to be made of steel are now worked in very expensive titanium, such as the roll-over bar and the pedals. Adding up the different pieces illustrated in the drawing we reach a figure of around 170,000 dollars for each car. And that does not include perhaps 5,000 dollars for such installations as the electrics, tubing and trunking and so forth.
It is evident that this is only the roughest of figures because a carbon fibre chassis can cost up to 60,000 dollars, and we are working on a basis of 22,000 dollars for conventional materials.
Add the running costs of 2.5 million dollars per team per year, and note, too, that the increasingly sophisticated components of a car, slimmed more and more down to the bone, have progressively shorter lives — which means still more costs. →

The figures indicated in the drawing and table on the next page concern a "standard" Formula 1 car and not the MacLaren MP4 (pictured with Lauda at Long Beach). It is almost entirely in carbon fibre, including chassis, bodywork, supporting panels and brake discs.

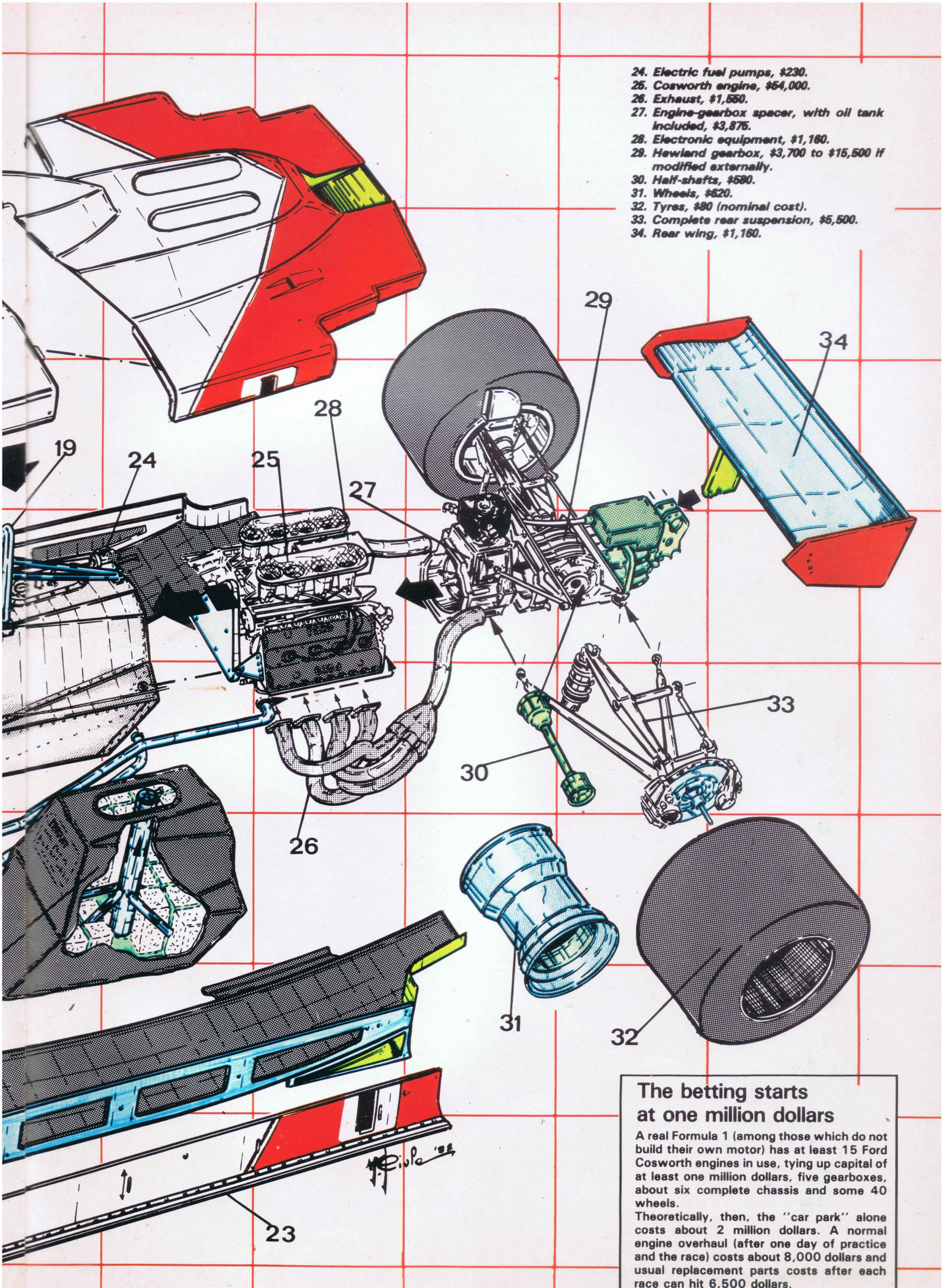
A $150,000 jigsaw

THE PRICE, PIECE BY PIECE

1. Bodywork $3,875 to $7,750, if carbonfibre.
2. Front wing, $775 to $1,550, if carbonfibre.
3. Front subframe to support the front wing and crash protection about $125.
4. Monocoque chassis, $20,000 to $60,000 if in carbonfibre.
5. Springs, about $230 or $350 if in titanium or variable rate springs.
6. Shock absorber, $620.
7. Upper whisbone, about $930.
8. Pedals, $385.
9. Steering column, $775.
10. Two brake pads, $25.
11. Two calipers for Lockheed discs, $465, or $385 for a Brembo.



12. Wheel hub, $1,160.
13. Brake disc, $230 or $930 in carbonfibre.
14. $620.
15. Fire extinguishers (2 × 2.5 kilos), $1,160.
16. Oil radiator, $385.
17. Instruments, $550.
18. Safety belt, $230.
19. Antiroll bar, $1,940.
20. Water radiator, $230.
21. Fuel tank with foam, $2,325.
22. Lateral pontoons, $1,160 to $2,325 if in carbonfibre.
23. Skirt system, $1,160.

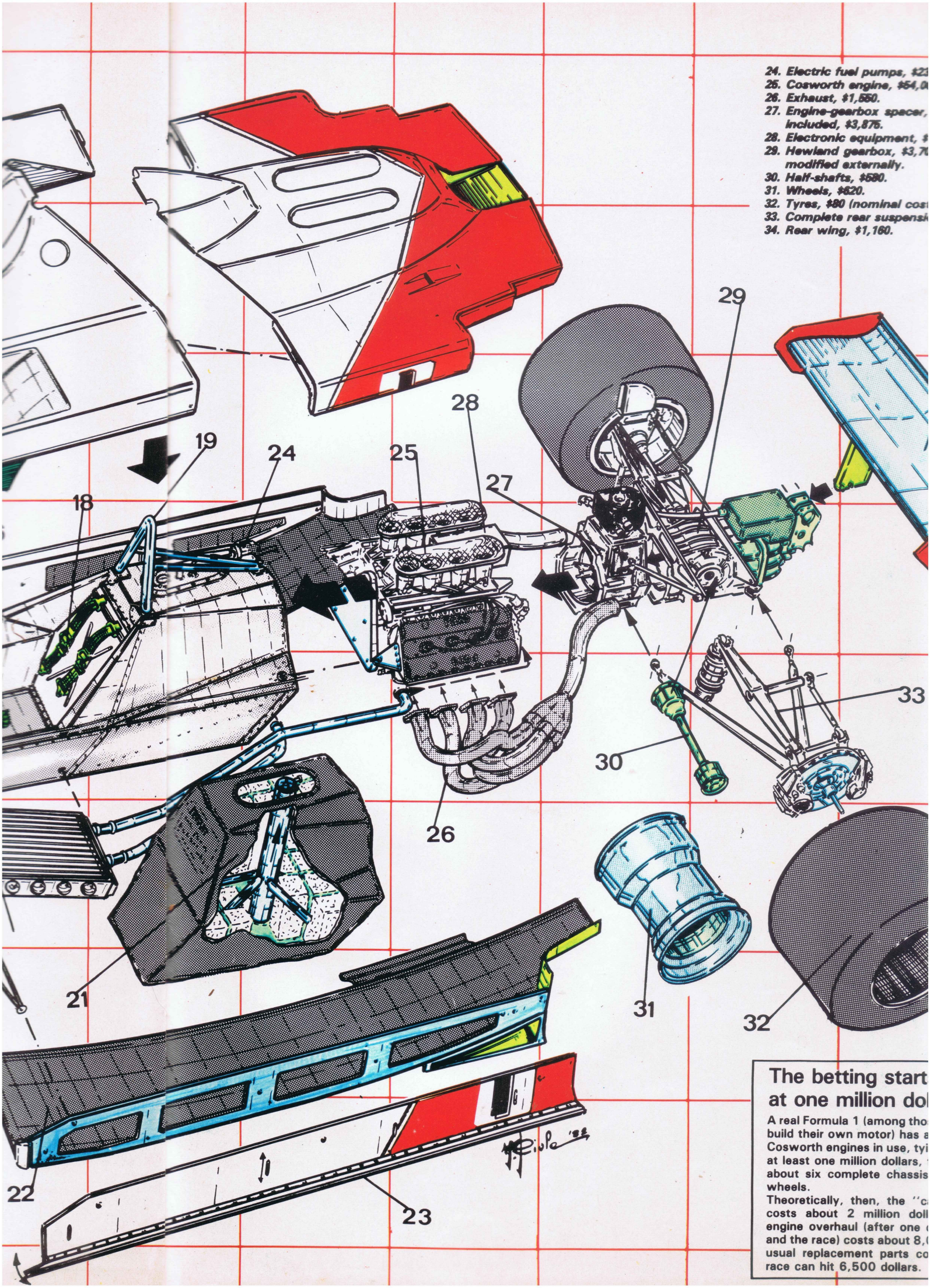


24. Electric fuel pumps, $230.
25. Cosworth engine, $54,000.
26. Exhaust, $1,550.
27. Engine-gearbox spacer, with oil tank included, $3,875.
28. Electronic equipment, $1,160.
29. Hewland gearbox, $3,700 to $15,500 if modified externally.
30. Half-shafts, $580.
31. Wheels, $620.
32. Tyres, $80 (nominal cost).
33. Complete rear suspension, $5,500.
34. Rear wing, $1,160.

The betting starts at one million dollars

A real Formula 1 (among those which do not build their own motor) has at least 15 Ford Cosworth engines in use, tying up capital of at least one million dollars, five gearboxes, about six complete chassis and some 40 wheels.

Theoretically, then, the "car park" alone costs about 2 million dollars. A normal engine overhaul (after one day of practice and the race) costs about 8,000 dollars and usual replacement parts costs after each race can hit 6,500 dollars.



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A $150,000 jigsaw

THE PRICE, PIECE BY PIECE

1. Bodywork $3,875 to $7,750, if carbonfibre.
2. Front wing, $775 to $1,550, if carbonfibre.
3. Front subframe to support the front wing and crash protection about $125.
4. Monocoque chassis, $20,000 to $60,000 if in carbonfibre.
5. Springs, about $230 or $360 if in titanium or variable rate springs.
6. Shock absorber, $620.
7. Upper wishbone, about $930.
8. Pedals, $385.
9. Steering column, $775.
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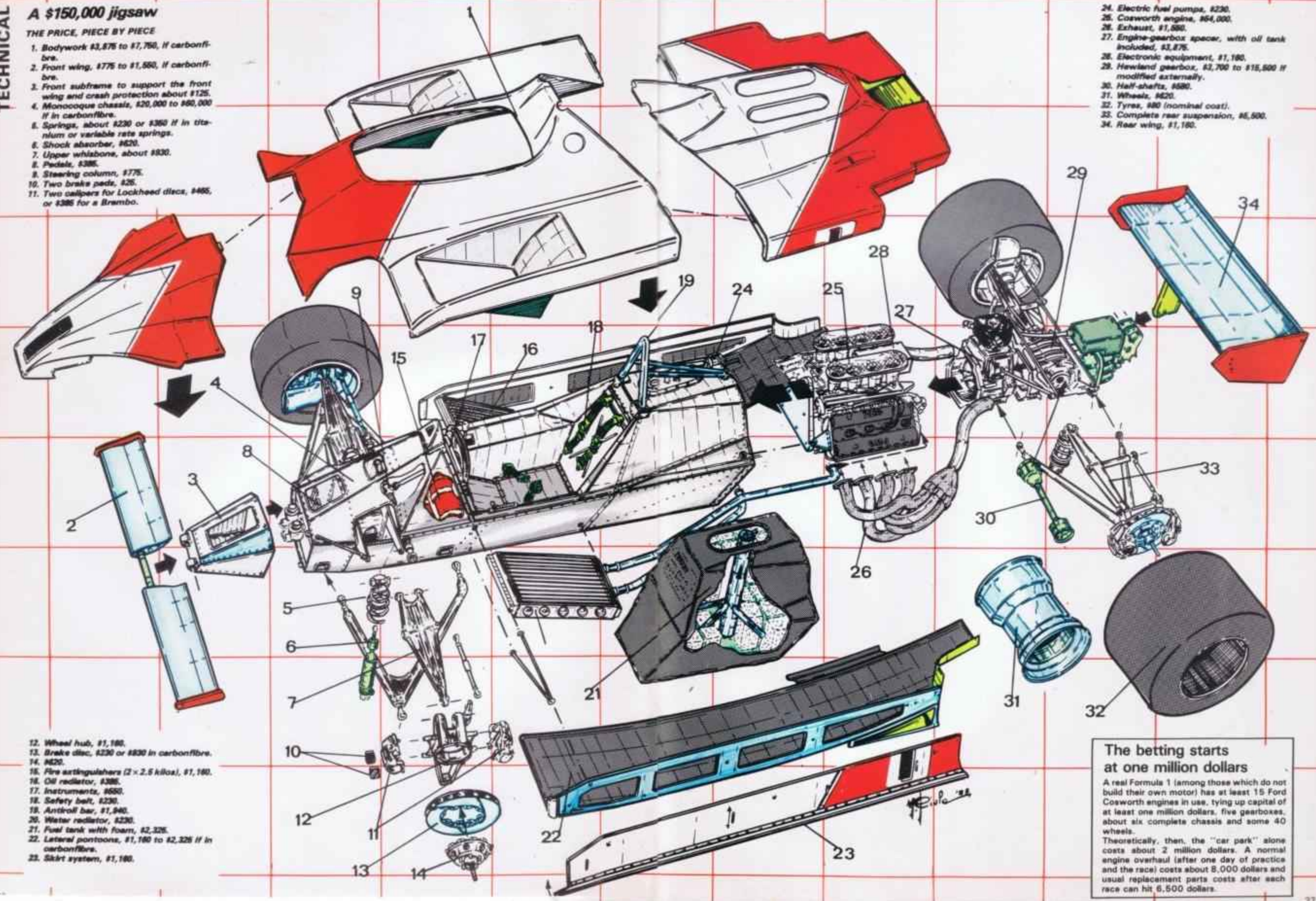

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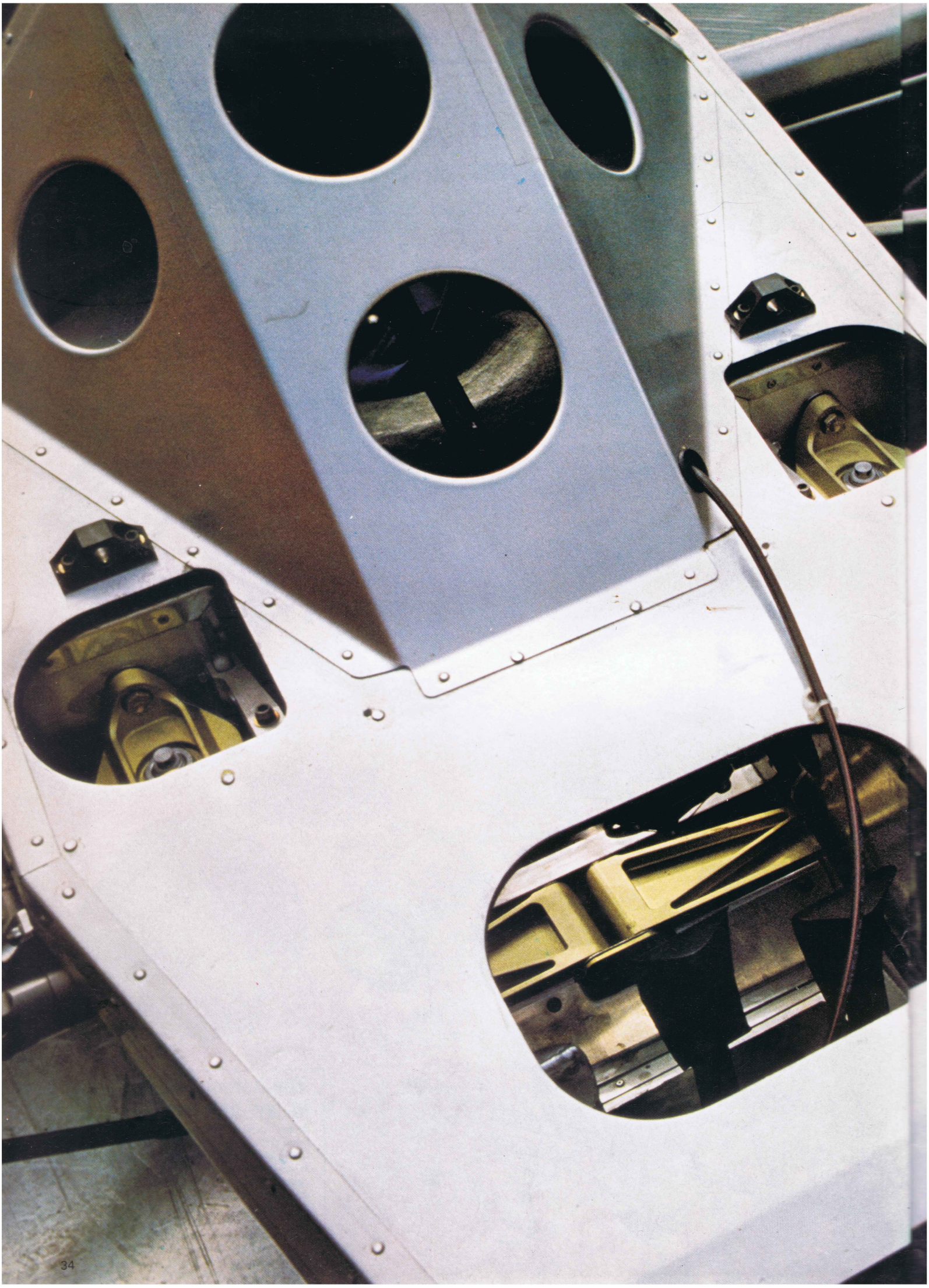
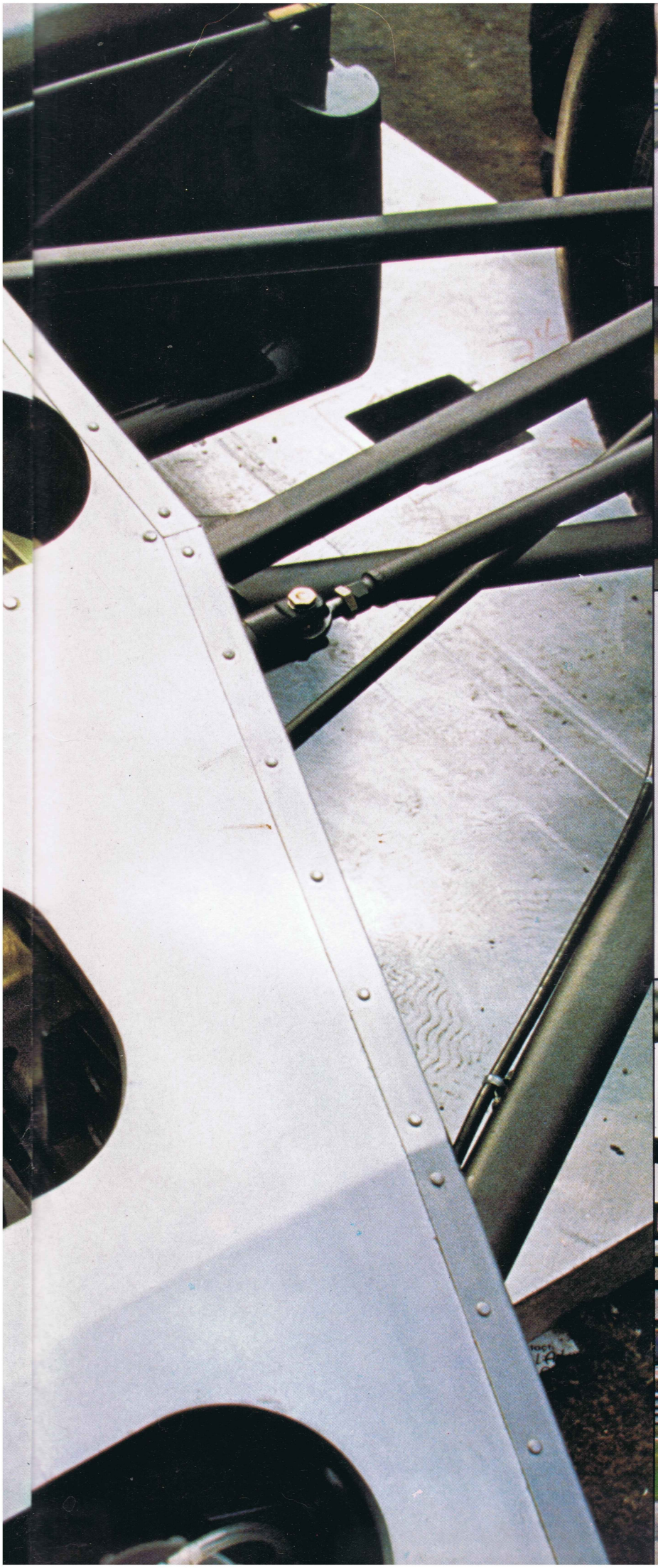
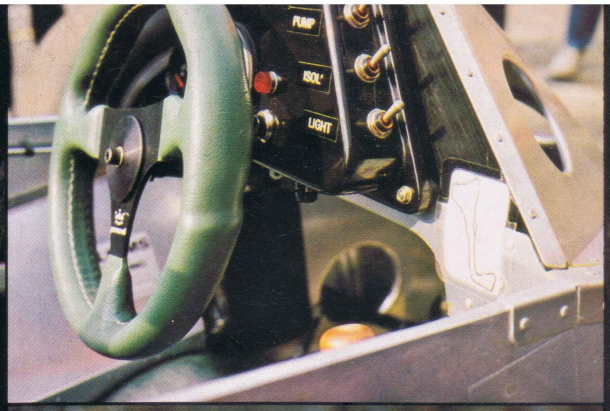
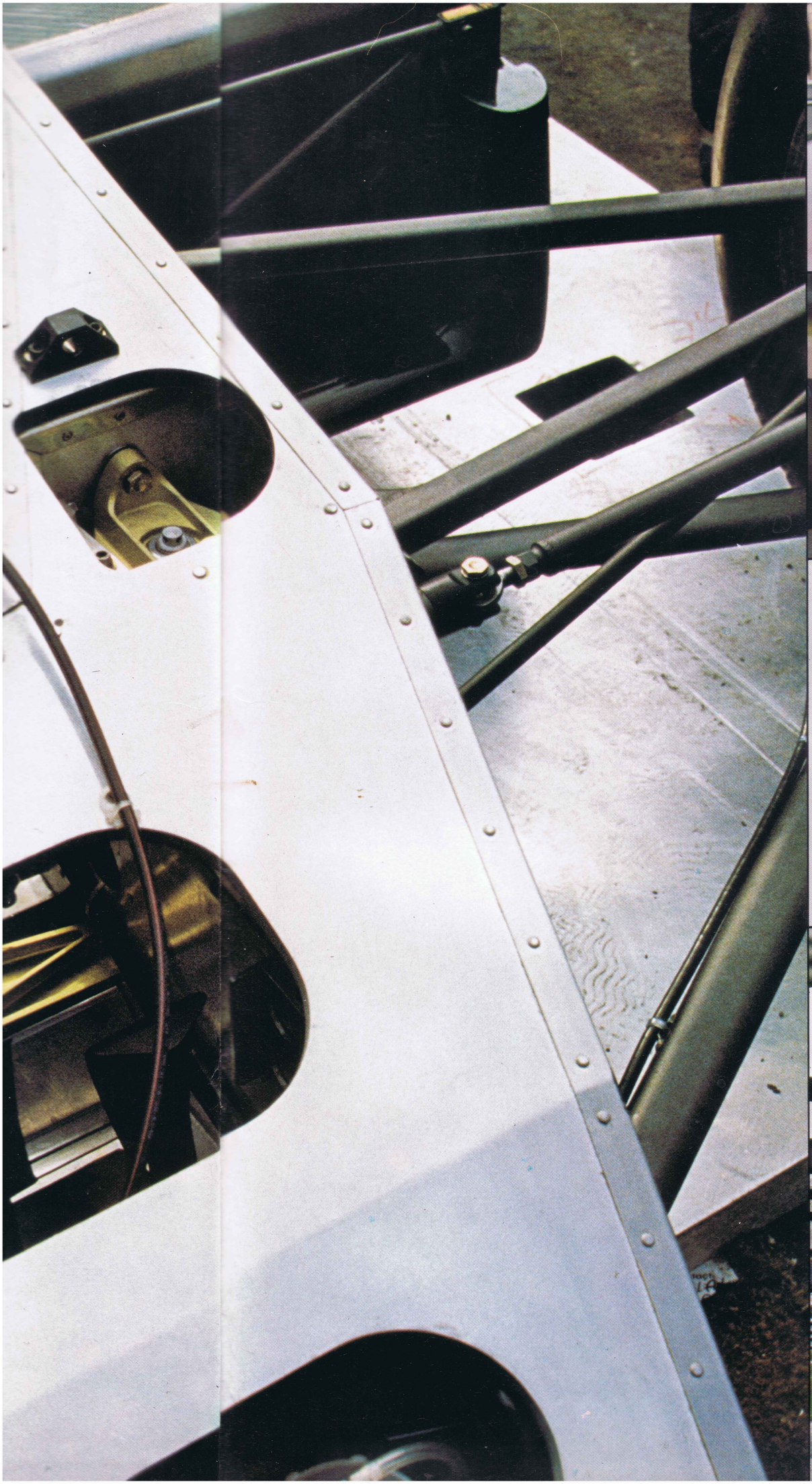


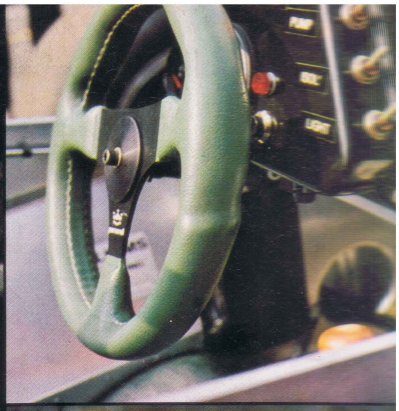




MAGNIFICENT PATRICK HEAD

As soon as it appeared, the FW08 Williams seemed to be as much a success as its forerunner, the glorious FW07. Patrick Head can draw, there's no doubt about that and his new car, without carbon fibre, nearly made it to the top in Belgium. However, Rosberg was no match for Watson's brilliant comeback.





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Valvoline
THEODORE

JAN LAMMERS' QUESTIONABLE COME BACK

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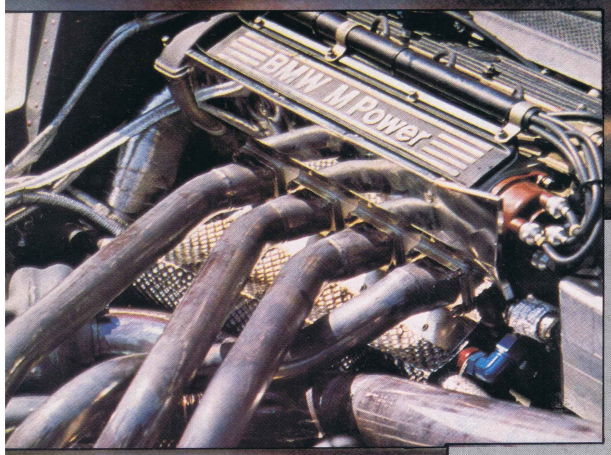

BRABHAM-BMW: NO LOVE AFFAIR

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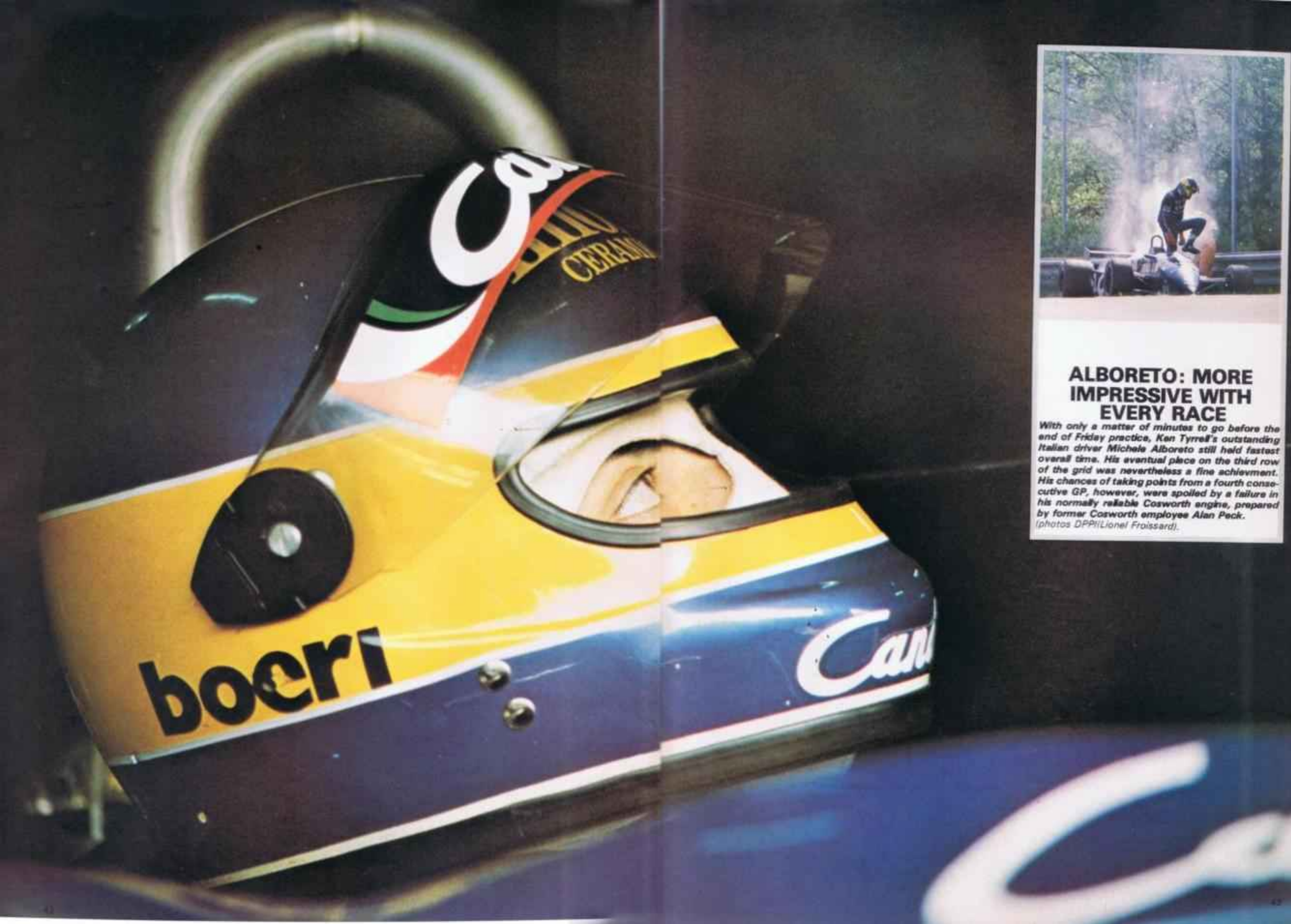

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TALBOT
TALBOT
GITANES
26

THE LAST OUTING FOR MONSIEUR LIGIER'S JS17s

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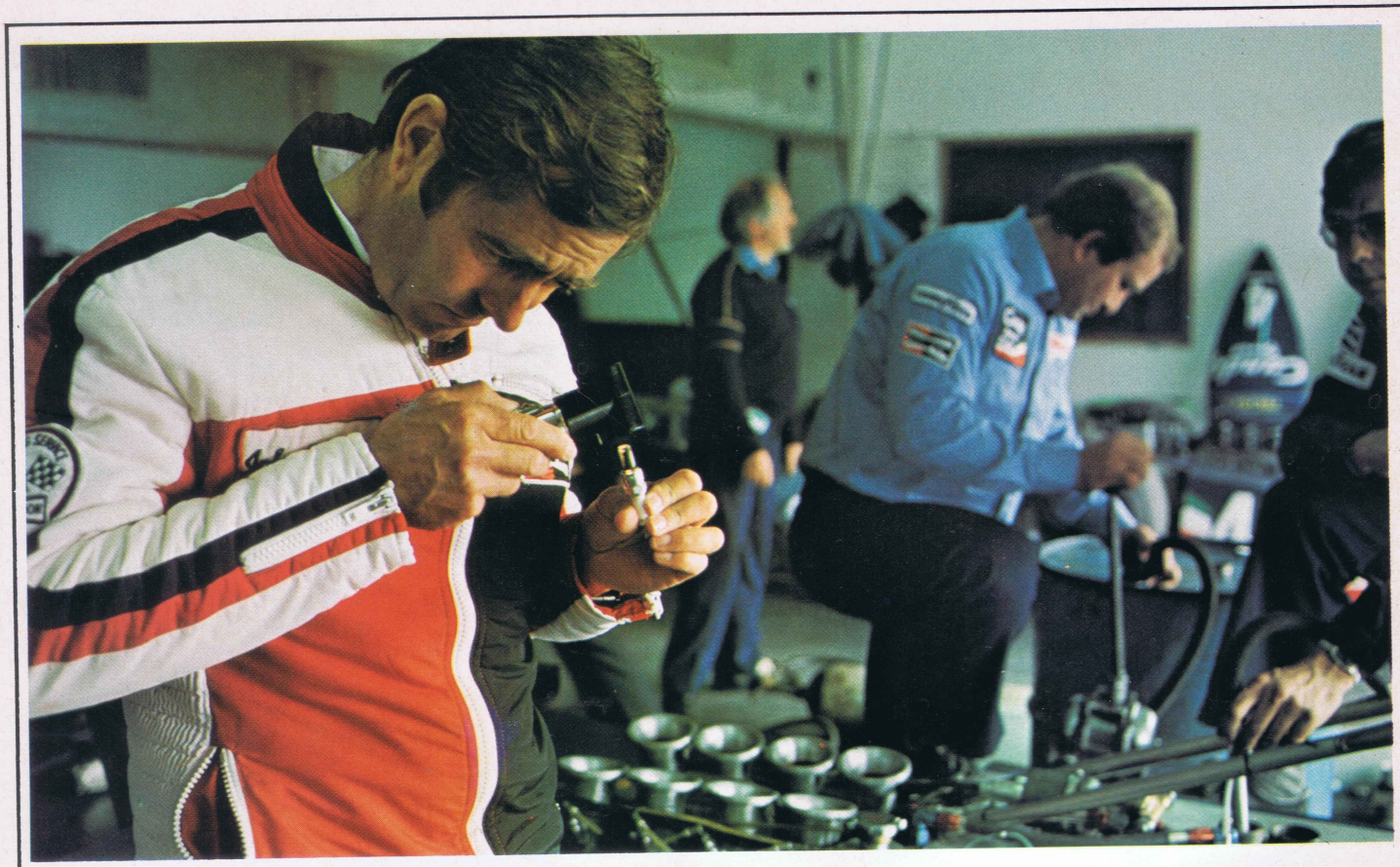


CHAMPION: SPARKING AT SPEED

For the past three years, every world championship Grand Prix has been won on Champion spark plugs. Twelve world champions have trusted Champion to spark them to victory. And at Imola on April 25, guess whose brand scored its 200th victory out of the 352 Formula 1 race which have been held since 1950!

By ***Maurice Hamilton***

It took almost three million sparks to see Didier Pironi through to a victorious result a Imola after 60 hard-fought laps. Each of the six Champion G54V plugs in the turbocharged engine of his 126 C2 Ferrari reached temperatures of up to 800 degrees Celsius... a little hotter, perhaps, even than the flash reading registered by a disgruntled Gilles Villeneuve as he stormed off in disgust after a San Marino GP which he had thought was his for the taking.

Villeneuve may have been displeased with his team-mate but at least Champion had cause for a minor celebration; Pironi and Ferrari had given 'The World's Number One Spark Plug' people their 200th Grand Prix win. For John Glover Champion's International Racing Manager, that achievement was a foregone conclusion since all 14 starters were fitted with Champion plugs. What mattered most that day was the efficient delivery of millions of sparks by 104 plugs. And, in the event, that's exactly what happened.

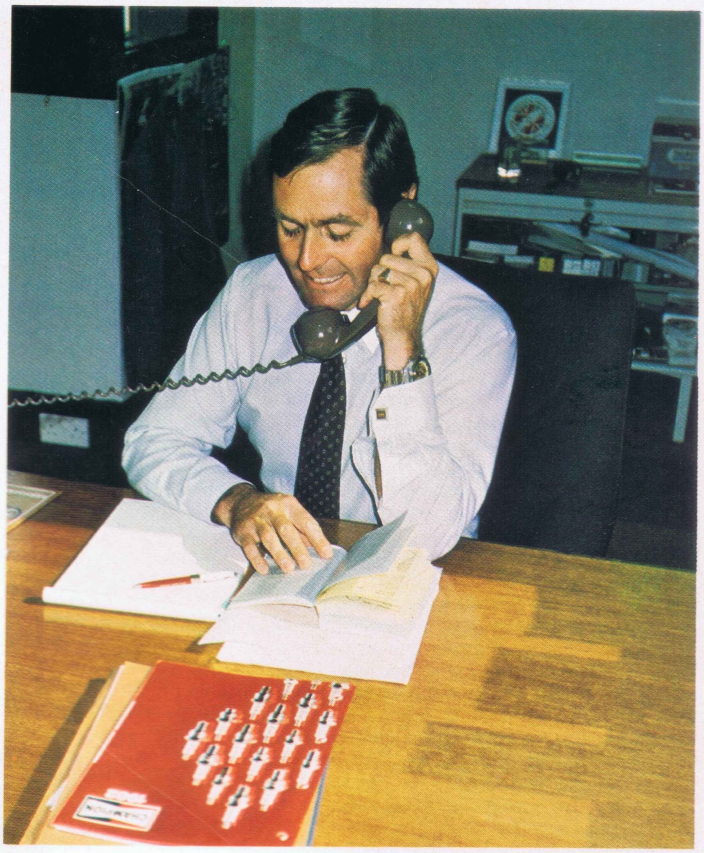
It's easy to take spark plugs for granted. "Plugs? Bring 'em along, stick' em in, fire the engine up and away we go, no problem." An oversimplification? Not really when you consider how things used to be. Remember warm-up plugs? Can you recall when was the last time you saw mechanics towing a Formula 1 car around the paddock as they tried to coax the engine into life? The changes have not gone unnoticed by John Glover.

"From my point of view, the biggest change has been the increased engine reliability in Formula 1. Nowadays you can put a Ford-Cosworth DFV into a car, run it for 800 miles, or whatever, and then out it comes.

"There was a time when you had to put in warm-up plugs followed by the cooler racing plugs. There was always the danger of fouling plugs up — but you don't hear of that now, thanks to modern ignition systems and reliable engine 'package.' I think the last time we used warm-up plugs in Formula 1 was in the Repco V8 and during the early days with the DFV".

John Glover speaks with authority. Having joined Champion in 1960, "straight from school," he soon worked his way into the engineering department in pursuit of racing activity. That came quickly when he attended races as assistant to Laurie Hands, and it wasn't long before he was responsible for the company's racing activites in the United Kingdom. During the week, there was test work with manufacturers such as Jaguar which gave valuable experience with plugs under various operating conditions.

The 1965 French Grand Prix at Clermont-Ferrand was to be John's first Formula 1 race abroad and a stepping stone to the position of Formula 1 Racing Co-Ordinator in the early Seventies. Eventually, his job was expanded to include all racing activity in Europe. Further management reshuffles this year brought John responsibility for all racing



activity — on an international basis. It's a daunting task.

Glover runs his deparment from a tidy desk in the Champion offices close to London's Heathrow airport. Delegation is the key to the smooth running of the operation. Jack Braken, for example, the Senior Race Technician, looks after motocross, and World Championship rallying; Serge Righi is responsible for Formula 2 and Formula 3, European rallying and inshore power boats; and Vince French is the man you talk to in World Championship motorcycle road racing and the UK motorcycle racing scene. Between them, Glover and his team service over 130 events in a season. That's a lot of sparks.

The seat of power, however, is in Toledo, Ohio, where all racing plugs are manufactured and the Research and Development department is located. ''If we have any technical queries, we simply send the plugs to the engineering department in the USA. We receive tremendous assistance from them,'' says John.

That technical back-up allows Glover to walk confidently into the Grand Prix paddocks around the world where Champion provides plugs for every F1 team except Lotus. His first task is to make sure they know Champion are present should a problem arise. In the event of trouble, Glover will not only 'read' the plug but also ensure that the press receives the correct information. ''The problem is that plugs are easy to remove. Invariably, if there's engine trouble, the plugs are whipped out straightaway. That can lead to people jumping to the wrong conclusions!''

Spark plugs can give a considerable amount of information to the trained eye. When called upon, Glover inspects the ''business'' end of the plug for a change in colour, speckled surfaces or 'cement boil' around the centre electrode. These are symptoms of overheating or detonation; advanced warning that an engine may be on the point of failure. A few minutes of advice from Glover at the appropriate moment can pay dividends in terms of preventing engine blow-ups in the middle of practice — or a race.

Champion is in the racing business for reasons other than saving teams time and money.

''We have to be prepared for operating temperatures of between 800° and 850 °C in an DFV, for example,'' says John. ''The average for a road car is 700° - 600 °C under normal conditions. Temperatures are critical, of course, particularly when you bear in mind that two or three degrees over-advanced ignition can mean a temperature rise of over 100°.''

The technical feedback from racing is invaluable and helps to keep Champion ahead of its rivals. Nevertheless, Glover is acutely aware of the strength of his competition.

''It's pretty severe''' he admits. ''Bosch, Motorcraft, NGK — they're all serious. I think NGK, who supply Lotus, are the people we need to watch. The Japanese work hard at it — but we are working hard to keep ahead and retain our status of the World's Number One. We've won all categories of motorcycle road racing for the last six years, for example, even though all the important manufacturers are Japanese. But that's no reason to become complacent.

''The prestige is also important,'' he continues. ''We need to keep our foot constantly in the door of major manufacturers, for obvious reasons. Formula 1 means Ferrari — and hence Fiat; saloon car racing means British Leyland, Alfa Romeo and others; rallying means Ford and so on. The thing to remember is that a competition plug is made of the same materials as the Champion plug which goes into your car.''

According to Glover, a spark plug is only as good at its insulator (the white ceramic piece to you and I). The five ribs on the aluminium oxide ceramic are there for reasons other than aesthetic value, their main objective being to help prevent leakage or 'flash-over' of current, even when the plug is oily and dirty. The insulator must withstand the normal handling and engine vibrations as well as the rapid and extreme temperature changes.

Inside the insulator is the centre electrode assembly which, in simple terms, appears at the business end of the plug and supplies the spark. Normally the spark leaps across the gap to an earth electrode or side-wire but, on a racing plug such as the G54V, there is no side-wire. This does away with the need to cut a hole through the threads and the welding of the side-wire. On the G54V, the firing end has a sparking surface which arcs between the centre electrode and the rim of the shell body — at the rate of around 5.200 per minute on a Ford-Cosworth DFV.

Plugs? Bring 'em along, stick 'em in, fire the engine up and away we go. No problem. □

SEVERAL NIGHTS OR DON'T PLAY

THE steamy Casbah, Pepe le Moko, Lauren Bacall, Claude Rains and Bogart, international intrigue, villainous doings, the Free French, *la guerre.* Back then, they knew how to create characters. Bogart was raincoated, cigarette dangling, hurt and fallible; Bogart was sultry, willing, whistling in the dark; Rains was imperturbable, divided in his loyalties and world-weary. They were people in the round.

True, Jean-Marie Beaugeste has a raincoat. It is a dark blue affair of modest, rubbery cloth, but it's somehow in the wrong place at the wrong time. It belongs to Occupied France, to *Lucien Lacombe.* He also has a dangling cigarette, but he has his roles wrong. A divided and ambiguous hero, passionate, authoritarian and hardly dashing, he is in Casablanca to save our sport. On his honour. With his guile. The last camel-charge across the desert he faces with equanimity. He sweats even as his troops say, *oui mon colonel.*

And what are his troops, that cast of fifty disguised to look like thousands, the gallant foreign legion of the FISA? What are they doing in the lobby of the Hotel Casablanca in grey business suits and blazers? Have they strayed onto the set from some pre-war bourgeois comedy of manners? or a farce by Feydeau? Are there bedroom scenes with closets upstairs? Are the garrisons they defend no more than automobile clubs destined the to rescue stranded motorists from the wastes of the Cote d'Ivoire and Siberia? Not very romantic.

Bernard Backall is allright. He plays the siren song, a torch singer for the interests (commercial) of the sport. His costume is ever dapper, svelte; he bangs out wisecracks as though half a dozen script-writers were at work for him on the back lots of Roebuck House, headquarters of Megalopolitan Productions. A good sort, not down on his luck.

And the same is true of Max Mossadeq, the firebrand of the nearly East. With his red hair flaming and freshly washed, his trim but not exactly ascetic figure striding from revolutionary to revolutionary in various intrigues, he is a figure we can recognize. His youth, we think, has been spent on the playing fields of the law; his meter, like his mind, keeps running. His swordplay is a delight to watch: where he swashes, they buckle.

But what to say of Marco Pussolini and Jean Sabre? Denizens of the Italian and French Quarters in the Casbah. The one looks like a seminarian whose hand has been caught up a cassock, the other like a courtly and worried *philosophe* who has just found out how to weigh gas. They have strayed into our picture and we shall just have to put up with them. They are not stars, but bit-players with a dagger or two up their caftans and brains a-bubble in their fezzes.

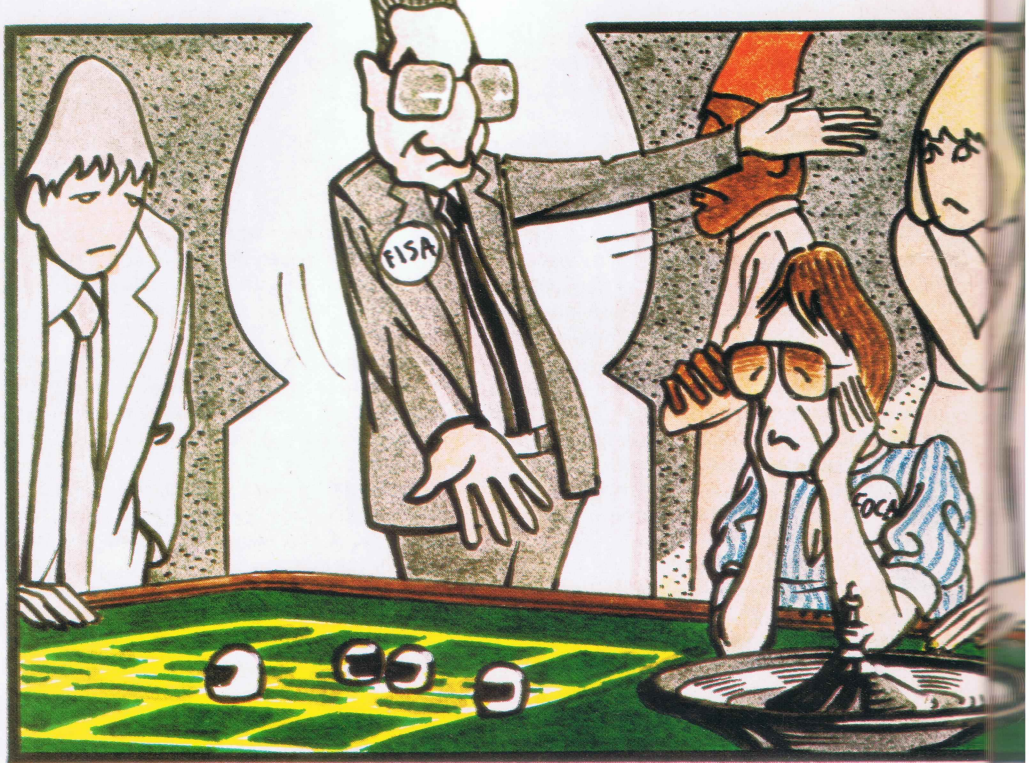
Colonel Beaugeste has a mission, you see. It is to save the citadel of our sport. If he fails, he has said in the first scene of this flick, he will resign, he will commit suicide four times over, he will disgrace himself in public, his epaulettes will be ripped off. He is used to looking the enemy in the eye — preferably in the whites thereof — and firing a jolly salvo or two to scatter the dreadful natives. But here he is in Casablanca with not just one enemy in sight, but two — the dreaded Sabre and Pussolini on one side, and the redoubtable Backall and Mossadeq on the other — and all he has to face them with are sundry knights and princes who quite obviously belong in some other costume drama, here a Metternich, there a Ferdinand of Bavaria, and troops of doubtful loyalty. Will he quell the rising of the dreaded *indigènes?*

To every desert war, of course, there is a cause: Abdul ben Boorish has gone off with the cross-eyed wife of the Emir of Tyrennia, you know the sort of thing. It causes the blood to flow faster. But here the cause of the revolting hordes is a much more complex intrigue. Mossadeq and Backall claim that lo! the camels of Pussolini and Sabre are powered with turbines that do cause their humps to rotate illegally and uncompetitively and that at their ritual *Sibeaq al-Jimaal* they did churn up clouds of dust and leave their own camels, forsooth! standing at the portals.

ON the other side, the sheikhs of FOCA (Falkland Officers Camel Associates) are accused by Pussolini and Sabre — and we hope to sneak this scene through the Hays Office, for it has its disgusting aspects — of watering their camels extensively at the start and then allowing said camels to, forgive me, piss away the weighty contents of their bladders on the burning sands, with the result that they are able to keep up with ther own dromedaries. And that, they contend with *mon colonel,* is neither cricket nor *e sport!* Mossadeq and Backall answer, verily, it is so, but how else could we keep up, and besides what are these *règles du jeu,* who makes them up, where does it say that camels must, poor beasts? rock across the desert unsupplied with water?

Brandishing the desert version of the Quran, coloured yellow as the rising sun, enter Colonel Beaugeste. Is it a clarification of an old rule or is it a new rule? Well, you can imagine how hard it is to make this squabble in Islam come alive for the little old lady in Dubuque for whom we all make these technicolour productions. So our scriptwriters got together and figured out this tense scene where the two warring bedouin factions are brought together in this white-walled room and they fight it out while Beaugeste looks on. You can just *feel* the romance of it. The muezzin calls the faithful to prayer, the Russian (you've got to have a Russian in it these days) bows his head in prayer or thought, his KGB interpreter, bullet-headed, interprets into his ear, Greeks pick their noses, Canadians waffle, Americans clean their nails with plastic toothpicks. It's got atmosphere.

The only trouble was that Beaugeste has this weakness for making speeches. You get him on the set, you wind him up, you give him the script and what does he do? He makes a speech. True, this one was only 75 minutes long, which is short for him, but honest: who wants to know about his long acting career and his honour? That *much* about it? By the end of it, you could see the extras sneaking out for a slash, holding their heads and groaning. But before that, we had a minor altercation on the set. One of the German extras, Hushpuppy von Ham-



IN CASABLANCA, IT AGAIN, SAM

merlock, got up and wanted to ask Beaugeste a question. Beaugeste was firm. You have to give the man that. He slapped him down with the *ordre du jour,* the agenda to you, and that was the end of Hushpuppy. I mean, who can fight an agenda?
Pussolini gave an eloquent speech, written by Mary Nello, one of our best new girls, in which he invoked piety and God, inshallah! on behalf of the prophet's memoirs called the *Musannad al-Concorde.* In that collation of laws, argued Pussolini, it clearly called for obedience to legality as defined by the authority, that is, Colonel Beaugeste. But the colonel, Pussolini argued, had been taking camel racing much too much into his own hands. Supported by his *wazir,* an extra called Syringea from Italy, he accused the colonel of exceeding his powers, acting behind his committee's back, not enforcing the laws and threatened Beaugeste with a Jihad, or holy war.

Sweating profusely and dramatically, Beaugeste thumps the table while Backall looks on sultrily and Mossadeq smiles subtly and consults the *Mussanad al-Concorde.* In forty years of camel racing, says Beaugeste, he has never been accused of being anything but fair, honest, upright, diligent, intelligent, active, impartial and... He went on a bit, but we had to cut at that point because it was after evening prayers and the tribes were hungry. A vote was taken which the Colonel won hands down, 17 to 0. Four shame-faced delegates — may Allah spread dung on their Amco cards! — abstained, incliding one inhabitant of the darker continent who had perhaps failed to understand the motion.

ONCE again Islamic law had prevailed. Beaugeste emerged to tell the faithful that all had been saved. Subtly, he had found a way to create a commission within a commission within the committee of the committee which would examine all these delicate matters and report back in September. Meanwhile, camels were to have shorter stirrups, were not to thirst, could not wear skirts and would generally go more slowly so that their drivers, those hardy sons of the desert, would not risk being humped off their charges. Great satisfaction was expressed all around.
But that still left the last *Sibaaq al-Jamal,* on infidel territory in Italy, to be ruled upon. FO Camel Associates had done the dirty at that *Sibaaq;* they had stayed, sulking, in their surplus British tents and muttered dark threats. Mossadeq, indeed, had threatened to take the whole matter to arbitration in Lausanne. What, one might well ask, had the capital of the cuckoo clock to do with a camel race?
The following afternoon, there were bloody scenes in that shuttered room. The extras were restive, Beaugeste made many more speeches, Pussolini tried to wear his opponents down by searching for ideas in his briefcase and taking a half-hour to state that a camel was a camel and not a cloud, but it was to no avail. Beaugeste called for another commission within a commission, but in the high point of this dramatic scene and in a burst of splendid Gallic energy, devised the term 'working party' for this Commission, which greatly pleased the faithful. And that working party did duly meet over a friendly barbecue of sheeps' eyes and oily goat, and in an atmosphere of great gaiety, particularly as yet another extra, this one from Portugal, had wandered in as an 'impartial' arbiter of this great quarrel.
There was much debate then about the word 'impartial'. It transpired that Senhor Tauregg did not like the word. It suggested that he was to act in some way, whereas he had friends in Paris who had sat on the very appeal that had started the *Jihad* or Holy War and he would certainly not like to compromise his impartiality by saying anything that could be partial or impartial, depending on his partiality or impartiality. Backall saw through that flimsy argument instantly. With Mossadeq on his side, he thrust him through with this witticism: ''Are you impartial?'' he asked. ''If you are impartial, then you must *act,* that is why you are here.'' But Taureg would have none of that. His impartiality, he replied with dignity, was of the silent sort.
Ah, they have a code of honour, these desert folk. The rest of them, Syringea, Pussolini and Sabre went off to face Camel Associates in another hotel, but alas? the rooms were all booked by a succession of Marx Brothers, Karl and so on, and as Allah willed it, so were their conversations without fruit. Like the argument about the rules of camel-racing, so all discussion of who had been right or wrong was put off to another day. Colonel Beaugeste had triumphed again: nothing had really been done, but much had *seemed to be done. The revolting tribes sulked off homewards and Beaugeste turned to his valiant knights and announced that whatever their* war, his own *Jihad* or Holy War had been won. He had been vindicated in his firmness, resolution, endurance, patience, vigour, virility and his upholding of law, order, authority, standards, truth, honesty...
He was still speaking as the Camel Associates took off for London. The field of combat was strewn with bodies, good had prevailed over evil. They would see! Ha! No watering of camels, no propelled humps, no accoutrements, no stirrups, no skirts, no special hoofs for getting to the oasis first, and, *sacrebleu!* if they didn't like it, they'd be without camels altogeher. Let them see how they liked walking! And from now on, at dawn for every four hours, the faithful should all prostrate themselves no longer towards Mecca, but to the Place de la Concorde.

Keith Botsford

NELSON'S COLUMN

AS you probably know, it was not entirely my decision to race our turbocharged BMW Brabham at Zolder. But I was very happy that we did use it, and not only because I brought it home in the points.

I'm not giving away any secrets when I tell you that the BMW car is not yet as good as the Ford-powered BT49 which I used in the last two Grands Prix. I really feel, though, that it is a potential race winner, especially when we get to the quick circuits at the end of the summer. I have been involved with the BMW project since the very beginning, so I want to see it get some good results. Zolder, I'm sure, was only the beginning.

Obviously, for a driver, the most exciting feature of the BMW turbo engine is the extra power. In fact it is so much quicker than the Ford that it takes three or four laps to get used to it. I found that I was braking for some corners — and then realising that I could have gone much deeper.

We still have a problem with a couple of things, though. One of them is the brakes. This is not surprising when you consider that the BMW car is probably 40 kilos heavier than the Ford, and that it arrives at almost every corner on a circuit like Zolder doing probably 35 km/h faster. We calculate that at some points on the circuit the brakes are having to do twice as much work as with the Ford car. We have fitted some slightly bigger brakes since the last test at Zolder: we know now that we need something much bigger.

As I think we proved in Belgium, the BMW engine itself is now looking very reliable. Although this was only the second time we have raced with BMW power, the recent improvements in the electronic systems on the engine have made a big difference. We did have some engine troubles on Saturday, but they were all the result of the installation, not the engine itself. And I am sure that the BMW directors will be delighted to see that our two turbo cars were running much longer on Sunday than the two yellow ones which started from the front row...

There are some snags, though, to having all that power. With the Ford V8 you can put the power in smoothly and slide the car round some of the corners. But there is so much torque with the BMW, over a very small rev range, that if you put your foot down when the revs are right, what you get is immediate oversteer.

In its latest version, the BT50 also produces an amazing amount of downforce, so much that we are using incredibly stiff springs to stop the chassis from being sucked down on to the track. With the stiff springs, unfortunately, the car slides too much in slow corners. We will have to do some hard work now to find a good compromise.

Before the start of the race at Zolder I knew that there would be problems with the brakes if I pushed hard in the first few laps. It seemed that we might have tyre trouble too, because all that torque puts a big strain on the tyres, even when you choose a hard compound (like we did). Because I wanted very much to be there at the finish, I drove as carefully as I could. But sparing the brakes and tyres seems to have put some extra strain on the gearbox, because second gear started to jump out. I was very worried that the teeth would strip off the ratio, so I held the lever in second gear when I could, and that worked until fourth gear started to give trouble. On one lap, it got so bad that the gearbox stuck in fourth and I turned into the pit lane so that the mechanics could help to sort it out. Just as I came in, though, the box freed itself, so I drove past the boys and my boss, Bernie Ecclestone, and rejoined the race.

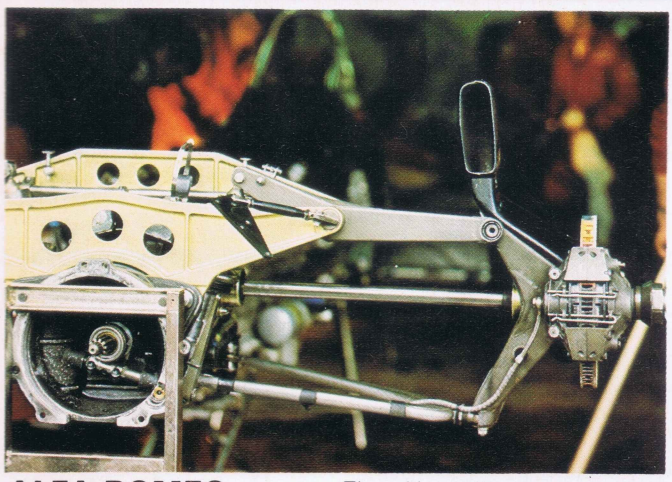
The only other incident was a bit of a game that Alain Prost played with me when I wanted to pass him. He pretended to go into the pits, then accelerated as I started to go past him. It was a bad moment and I thought I was going to have a big accident, but in fact I just went over a kerb and was able to rejoin.

The engine felt so unbreakable that I decided 20 laps from the end that there was nothing to lose. I therefore gave the engine full boost, which made it possible for me to overtake one more car and get into the points.

I had to rush away from the circuit very soon after the race, so I missed all the trouble in the scrutineering bay. But I heard that Niki Lauda had his third place taken away from him after they found his McLaren was a couple of kilos under the weight limit. Knowing Niki, I imagine he will be furious about that, which is understandable. But he has only lost four points from Zolder. At Rio I lost my win and nine points, which was difficult for me to accept. I'm glad to have BMW power to help me win back those points...

Nelson Piquet

Cockpits



ALFA-ROMEO

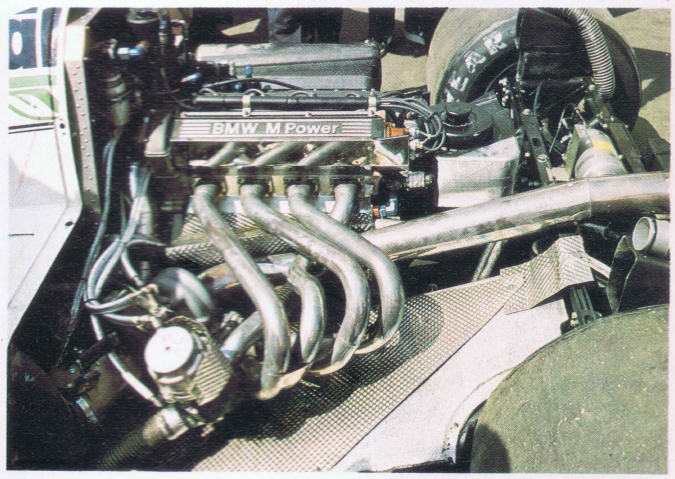
182/1: Bruno Giacomelli (I)
182/4: Andrea de Cesaris (I)
182B/3: T-car

The ballast bringing Giacomelli's and de Cesaris' cars up to 580 kilos, hastily added in the pontoons at Imola, was moved under the fuel tank, exactly at the centre of gravity.
The T-car, named 182B, was entirely new. Designed after aerodynamic studies in the quarter-scale windtunnel at St. Cyr, it is characterised by a very narrow body, about 120 centimeters wide instead of the previous 140 cms. The side radiators are consequently narrower and longer, while the aerodynamics are a new development: the lower profiles at the back of the pontoons have been raised to move the centre of pressure forward and no longer surround the half shafts which are back in the air flow. The vertical sides of the pontoons to which the skirts are attached extend behind the rear wheels. The rear suspension is wider and the exhausts come out above the suspension.

BRABHAM

BT50/03: Nelson Piquet (Bra)
BT50/02: Riccardo Patrese (I)

Having been publicly summoned by BMW to use its motor, Brabham brought three cars with the 4 cylinder turbos, which had not been seen racing since Kyalami. The aerodynamics of the BT50 were changed through a modification of the profile of the pontoons and new front and rear wings. Piquet and Patrese used a big Monaco-type rear wing Friday and a smaller one Saturday. The brakes were conventional and not carbon fibre. The latter are 12 kilos lighter and would have called for the use of cooling water tanks. These were not necessary in the Zolder configuration to reach the minimum weight. The traditional brakes were nonetheless of a new type: bigger than ever seen on the BT49, they were also equipped for the first time with Lockheed double calipers at the rear. Nelson Piquet confessed he would have preferred using a Cosworth for the race.



ATS

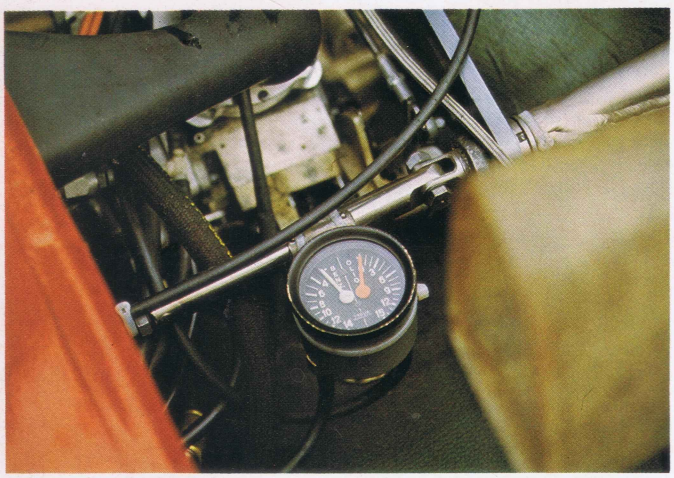
GHS1/03: Manfred Winkelhock (GER)
HGS1/04: Eliseo Salazar (Chile)
HFS1/01: T-car

The suspension has been modified slightly for greater camber to take Michelin radials. The small brake cooling water tank has been removed.

ENSIGN

N181/1: Roberto Guerrero (COL)

No major changes on the Ensign, which only had a somewhat more rigid pontoon support and no water reservoirs of the Long Beach type. A new rear suspension, lighter and of a different geometry, is planned for Monaco. New rear pontoon profiles will appear later.



SEFAC FERRARI

126C2/058: Gilles Villeneuve (CAN)
126C2/059: Didier Pironi (F)
126C2/057: T-car

The front suspension pickup points were strengthened at the anchor plates, and the lower rear suspension arms, of which one broke on Pironi's car during practice at Imola, were made stronger with a small bar across the inside of the triangle. The pontoons had a different interior profile and the Brembo brakes were drilled on their friction surface for the first time. Villeneuve used an engine in practice that was four kilos lighter than usual, but because its reliability was unknown, it had not been planned to use it in the race. The Ferrari team left Zolder on Sunday evening because of Villeneuve's tragic accident.

FITTIPALDI

F8D/3: Chico Serra (BRA)
F8D/4: T-car

No changes as Emerson Fittipaldi is concentrating all his resources on a new car, whose construction is very far behind schedule. Ricardo Divila, the Braziian engineer who designed the first Copersucars for Wilson Fittipaldi, has drawn the new car.

TALBOT-LIGIER

JS17/05 Jacques Laffite (F)
JS17/04: Eddie Cheever (US)
JS17/02: T-car

The new JS19 did not appear, for reason explained elsewhere, and the only new feature on the old JS17 was the use of carbon fibre discs on Cheever's car on Friday. Already tested on the Michelin track at Clermont-Ferrand, the discs were made by Aerospatiale, who build the Concordes, and also supplied to Renault.

LOTUS

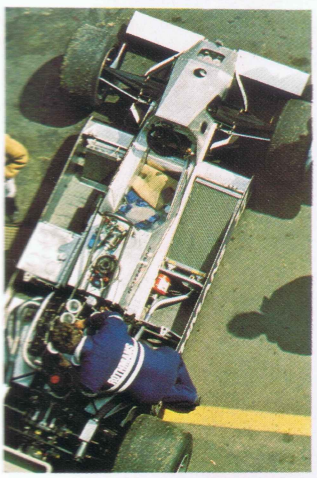
91/6: Elio de Angelis (I)
91/7: Nigel Monsell (GB)
91/8: T-car

The T-car is a new chassis with a normal wheelbase and a watertank in the right pontoon. The two race cars had a small reservoir in each pontoon and their weight distribution was changed radically after private testing in Britain. They used the short wheelbase variation of the front suspension and had various mechanical improvements. Both had large rear wings. Some teams suspected the Lotus cars were underweight during qualifying because at each stop they were pushed quickly into the garages and the roller doors pulled down.

MARCH

821/RM08: Jochen Mass (GER)
821/RM09: Raul Boesel (BRA)
821/RM10: T-car
821/RM07: Emilio de Villota (SP)

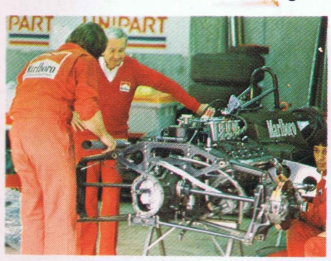
The T-car had a new monocoque identical to the regular cars but using different materials, such as a steering column in aluminium, and lower bodywork and front and rear wings in carbon fibre. They had a very large water resevoir and the engineer, Adrian Reynard, was proud of having constructed the lightest car in the field. The Marches have not yet been tested in a windtunnel for budgetary reasons which have now been solved, and a new car is being built.



MCLAREN

MP4B1/02: John Watson (GB)
MP4B1/06: Niki Lauda (Austria)
MP4B1/04: T-car

Lauda's car had a new monocoque, but unchanged in design.

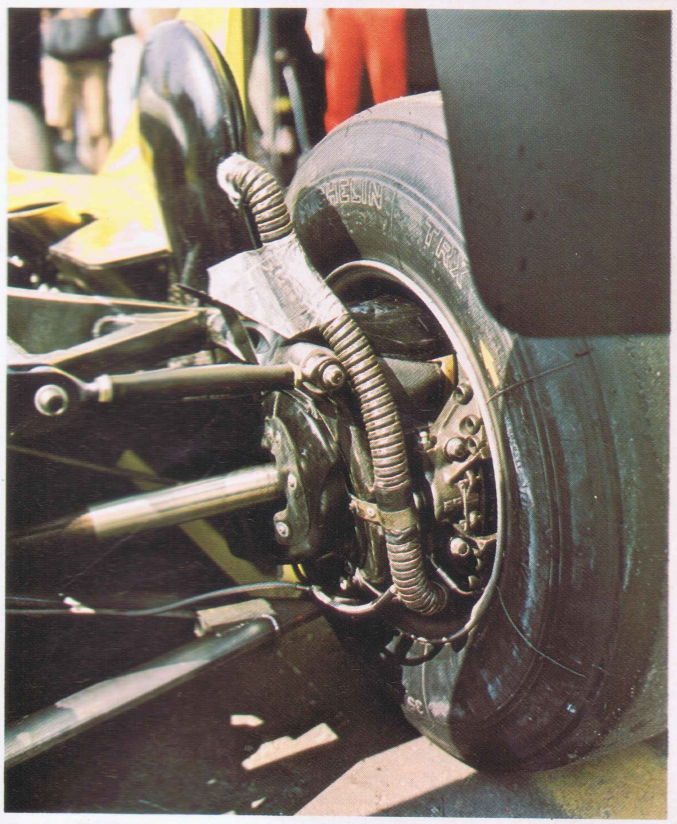


The cars were at the minimum weight, as events were to prove, without carbon fibre discs and set up identically to Long Beach where, according to Teddy Mayer, they were never under about 570 kilos. Like Lotus, McLaren International ran its cars into the garage at every stop during practice -- but the suspicion is that it was done more to create uncertainty than to hide anything. John Barnard is working on an aerodynamically different underbody for Monaco.

OSELLA

FA1C/3: Jean-Pierre Jarier (F)
FA1C/2: Riccardo Paletti (I)
FA1C/1: T-car

The new car designed by Herve Guilpin was not yet ready, many rear suspension components not being finished in time. It should be complete for Monaco and Guilpin has started a second project for a car to appear later in the season. The usual FA1Cs had different lower anchorage points for the rear shocks, and Paletti's also had modified rear suspension wishbones. Osella planned testing sessions at Varano or at the Ferrari track at Fiorano after Zolder.



RENAULT

RE30B/8: Alain Prost (F)
RE30B/7: René Arnoux (F)
RE30B/5: T-car

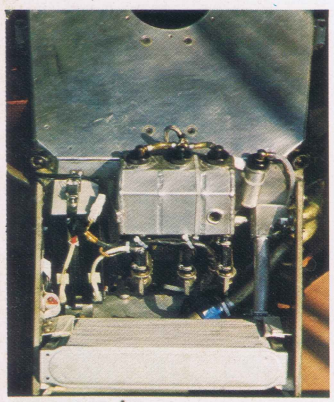
No notable changes, most of Renault's preparations having concentrated on the brakes for which Zolder is a particularly punishing circuit.

Cockpits

THEODORE

TY02/1: Jan Lammers (NL)

Theodore, which called in Lammers to replace Derek Daly, put a wider front track on the car. It also had sidepods fabricated from a different material to increase their rigidity, and a new wing. Lammers tested at Snetterton before Zolder, and the TY02 was brought up to minimum weight with a small amount of ballast placed in the chassis. Designer Tony Southgate, who has a good dozen years of Formula One behind him since starting at BRM, confessed to being discouraged by the current situation and at present, has no new design in progress.



BP

Toleman Hart

TOLEMAN

TG181/07: Derek Warwick (GB)

TG181/06: Teo Fabi (I)

No modifications since Imola, the whole team having worked on the new car. It is well behind schedule and may not appear until Monza. The monocoque will be in carbonfibre and not a single bolt will be common with the current car. Toleman hopes to construct the monocoque itself, with the possible help of a research unit at Imperial College, London.

TYRRELL

011/5: Michele Alboreto (I)

011/4: Brian Henton (GB)

011/2: T-car

Alboreto's car had modified anchorage points for the shocks which in fact were a return to the older idea. The bodywork now uses carbonfibre and is lighter, helping its already excellent braking. The Tyrrell will have new lower bodywork, which should have appeared at Zolder, in time for Monaco.

WILLIAMS

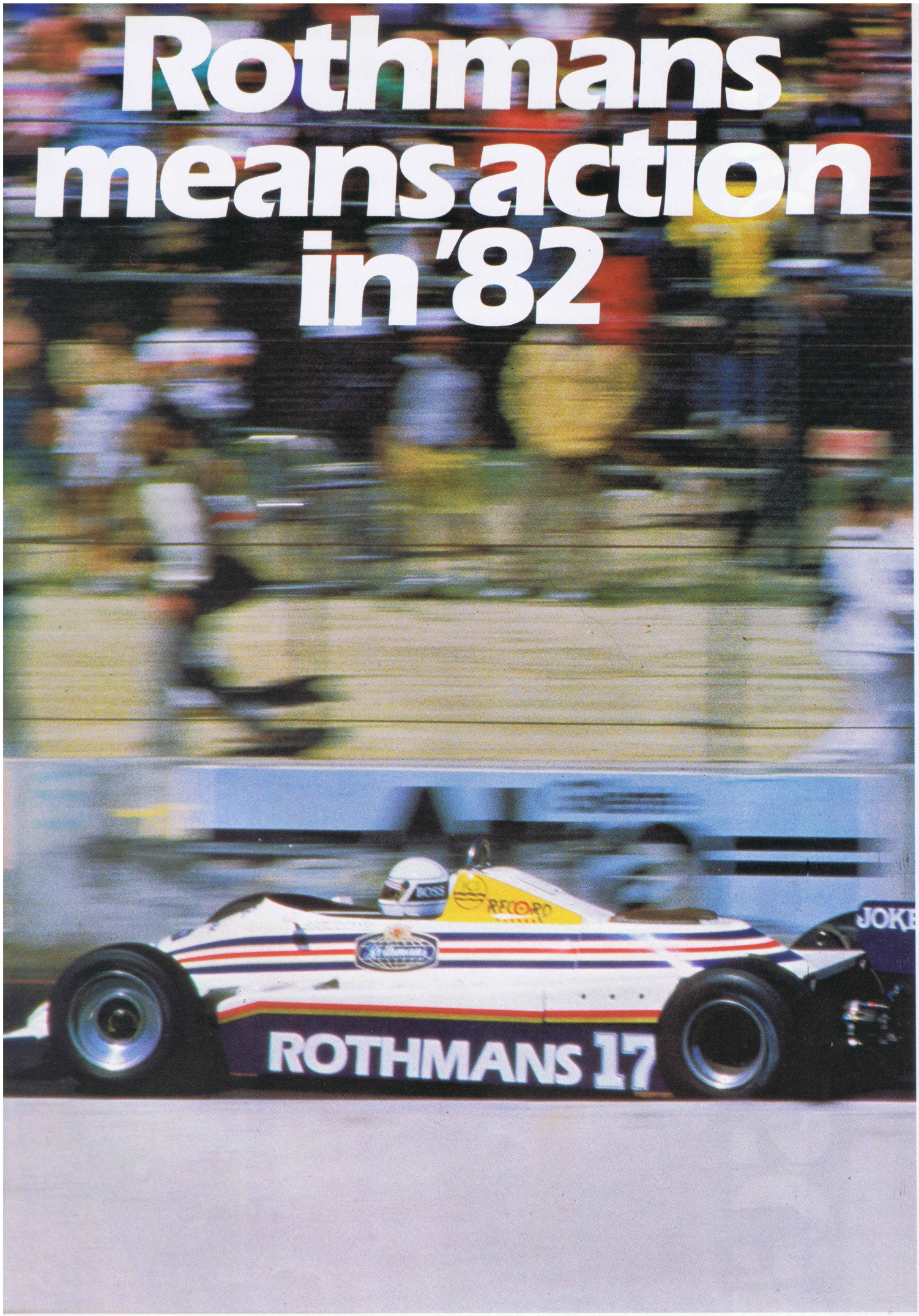
FW08/4: Derek Daly (IRE)

FW08/3: Keke Rosberg (FIN)

FW08/1: T-car

The FW07 is in the museum, and Frank Williams brought three of the four new FW08s to Zolder, chassis FW08/2 being reserved for development and, barring exceptional circumstances, not destined to appear in Grands Prix. The characteristic of the FW08 is the very short wheelbase, shorter than the FW07 by 16 to 18 centimeters, because they were originally designed as six-wheelers. The short but high fuel tank has the inconvenience of raising the centre of gravity. Front and rear track is identical and the monocoque, without any carbon fibre, is more rigid than its forerunner and has some similarities to the Tyrrell. The front suspensions are Brabham type, rising rate by linkage between the upper wishbones -- which replace the usual rocker arms -- and the lower shocker anchorage points. This ultra-simple car, with sidepod airflow particularly closely studied to give better radiator cooling, weighs in around 540 kilos, according to other teams. The teams claim the weight is made up at the end of practise sessions by replacing the usual rear wing with a much heavier one. Williams himself said simply the car used heavier components generally. But it did have one big water tank in the right sidepod.

Rothmans means action in '82



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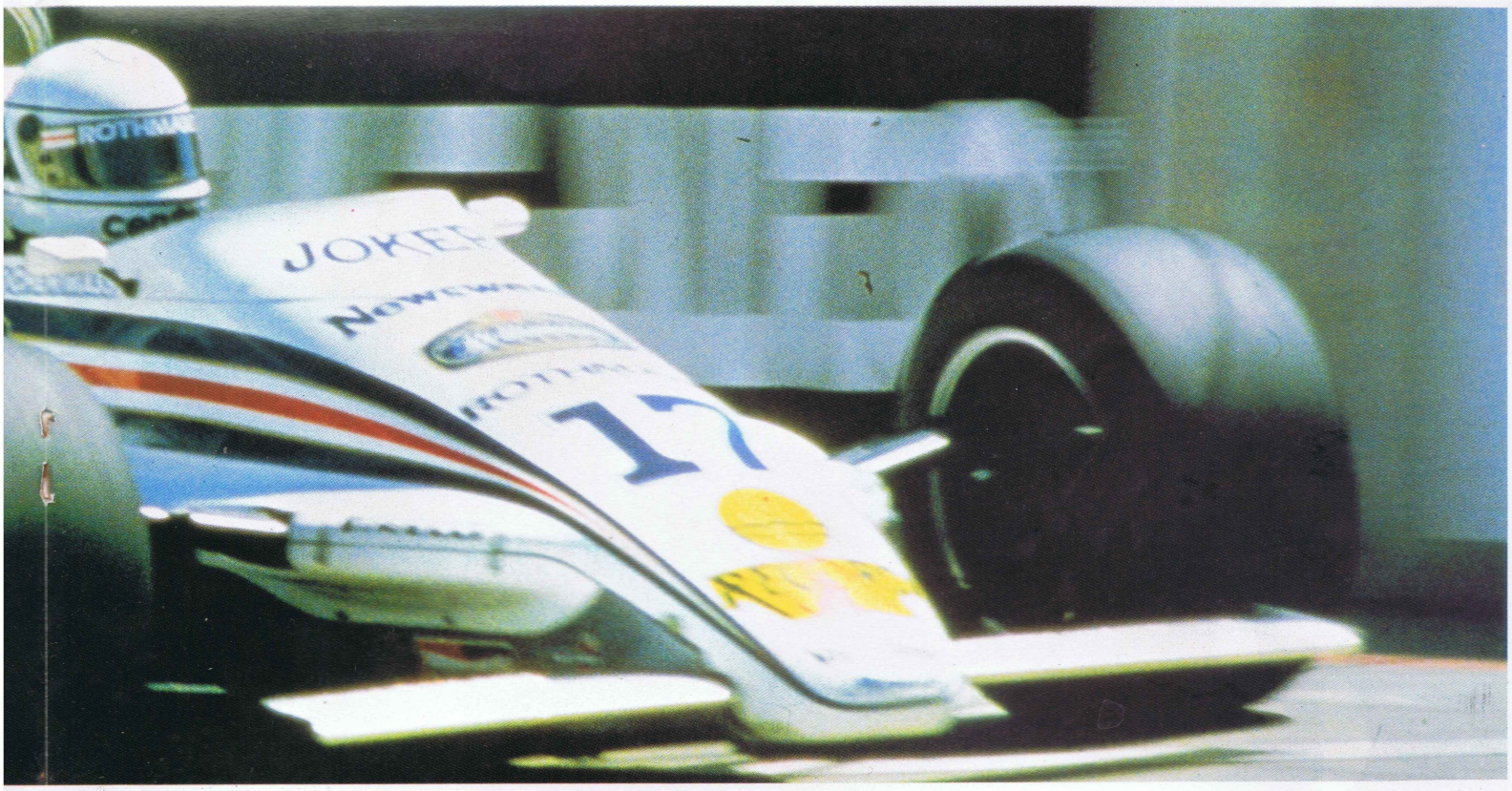

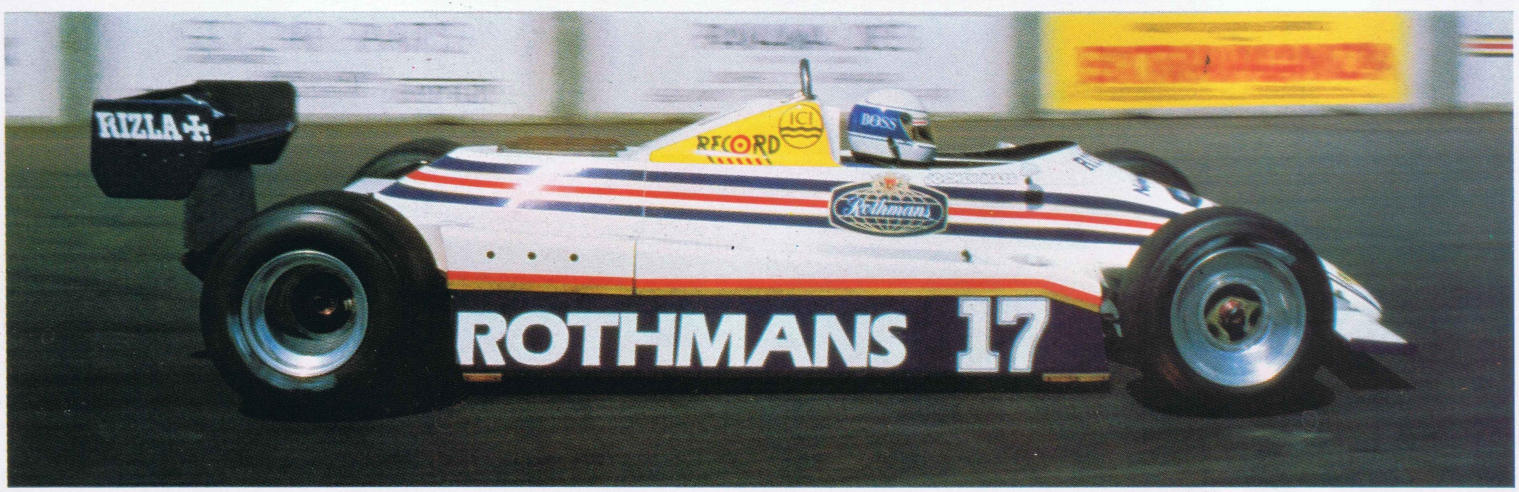

and Prix Team

Rothmans

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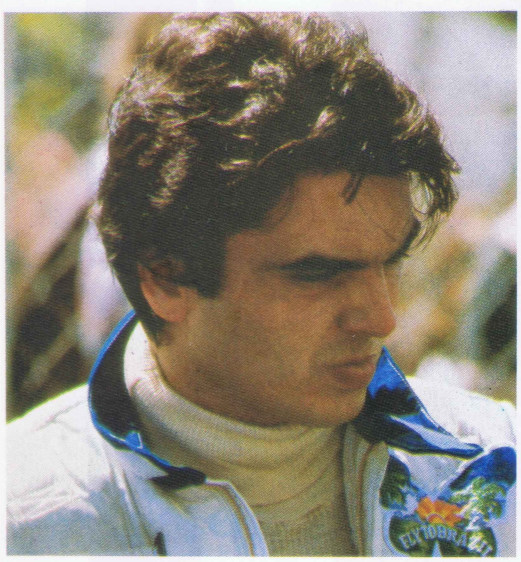

ROTHMANS
SIMPSON